DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT Housing - Federal Housing Commissioner	STRUCTURAL ENGINEERING BULLETIN NO. 1128 Rev. 3 (Supersedes issue dated May 28, 2008)
TO: DIRECTORS, SINGLE FAMILY HOCs DIRECTORS, MULTIFAMILY HUBs	ISSUE DATE February 27, 2017
	REVIEW DATE February 27, 2020

SUBJECT: **1. Item Description** Shop Fabricated Foam Core Sandwich Panels Premier Panels

2. Name and address of Manufacturer

Premier Building Systems
19727 57th Ave. E.
Puyallup, WA 98375

This Structural Engineering Bulletin (SEB) should be filed with other SEBs and related Bulletins on materials or products as required by prescribed procedures.

1. GENERAL:

This Bulletin sets forth specific requirements under the Technical Suitability of Products Program for determining the eligibility of housing to be constructed under HUD mortgage insurance, or other HUD housing programs.

2. SCOPE:

This Bulletin applies only to the structural features of this method of construction. Final determination of eligibility is made by the appropriate HUD Homeownership Center (HOC). Other factors considered by the HOC will be valuation, location, architectural planning and appeal, mechanical equipment, thermal characteristics, and market acceptance. Consideration is also necessary to determine whether a specific property will qualify under the specific HUD program, when constructed according to the method outlined in this Bulletin, and where the structure is to be located.

In geographical areas subject to hurricanes, earthquakes, or other severe conditions affecting dwelling structures, the HUD Field Office or Homeownership Center shall require additional safeguards in proposed designs, when necessary.

3. MINIMUM PROPERTY STANDARDS (MPS):

Compliance with HUD MPS will be determined by the HUD Field Office or Homeownership Center of the same basis as submissions involving conventional construction, except for the special features described in this Bulletin.

4. INSPECTION:

Field compliance inspections covering conventional items of construction and any special features covered in this Bulletin shall be made in accordance with prescribed procedures.

The appropriate HUD Field Office or Homeownership Center shall furnish a copy of a HUD field inspection report to Headquarters, Office of Manufactured Housing Programs, where there is:

a. Evidence of noncompliance with portions of the system of construction described in this Bulletin.

b. Faulty shop fabrication, including significant surface defects.

c. Damage to shop fabrication items or materials due to improper transportation, storage, handling or assembly.

d. Unsatisfactory field workmanship or performance of the product or system.

e. Any significant degradation or deterioration of the product or evidence of that of durability or interest and performance.

Periodic plant inspections will be made by HUD Field Office, Homeownership Center, State Agency personal, or a HUD designated representative in accordance with their prescribed procedures. Factory inspection report shall be submitted to HUD headquarters, upon request.

5. CERTIFICATION:

The manufacture named in this bulletin shall furnish the builder with a written certification stating that the product has been manufactured in compliance with the HUD Minimal Property Standard (MPS), except as modified by this Bulletin. The Builder shall endorse the certification with the statement that the product has been erected in compliance with the HUD MPS, except as modified by this Bulletin, and that the manufacturer's certification does not relieve the builder in any way, of responsibility under the terms of the Builder's Warranty required by the National Housing Act, or under any provisions applicable to any other housing programs. The certification should be furnished to the HUD Field Office upon completion of the property.

OUTLINE DESCRIPTION, CATEGORY II CONSTRUCTION

GENERAL:

Shop fabricated foam core sandwich roof, exterior wall, and floor panels are furnished in the method of construction. Panels consist of Oriented Strand Board (OSB) skins and expanded polystyrene (EPS) foam cores. Panels are transported to the building site where they are connected together.

All materials and methods of installation shall be in accordance with HUD Minimum Property Standards (MPS), Use of Materials Bulletins (UM), and Materials Releases (MR), except as may be specially noted herein. Plumbing, heating and electrical systems are field installed and connected.

This Bulletin is based upon a structural review of the Premier Structural Sandwich Panels, but may be considered applicable to all structurally similar units of this company. Foundation design and nonstructural items (such as architectural, plumbing, heating and electrical features) are not covered by this Bulletin.

SPECIFICATIONS:

Form HUD-92005, "Description of Materials" Specifying only the structurally related items (Nos. 1 to 12, 14, 26, and 27) as originally submitted for determination of technical suitability, describes the materials that shall be used in construction of housing units under this system of construction.

Materials:

Core: The core material is EPS foam plastic with a thickness of 3 ½ to 11 ¼ inches. The EPS core has flame spread rating of not more than 75 and a smoked developed rating of not more than 450 when tested in accordance with ASTM E 84 and a minimum density of 0.90 pcf.

Facing: Panel facing material is minimum 7/16 inch thick Structural I, Exposure 1 OSB complying with DOC PS-2.

Adhesive: The adhesive is Structural grade Type II, Class 2 laminating adhesive. (Ashland Adhesive Isoset WD3-A322/CX-47, Ashland Adhesive Isogrip 3030D, DOW (Mor-Ad) M650 series.

Splines: The splines for the Type S panels are nominal four inches wide by 7/16 inch thick OSB material or a 3-inch wide mini panel that matches the EPS core thickness of the panels being attached. The Splines for Type I panels are I-joist, sized in depth to match the core thickness. The splines for Type L panels are nominal two inches thick dimensional lumber sized in depth to match the core thickness.

Design and Construction Requirements:

PBS Panel R-Values

Type I modified EPS core

Core Thickness	R-Value at 75˚	R-Value at 40˚	R-Value at 25˚
3-1/2"	15	16	17
5-1/2"	23	25	26
7-1/4"	30	32	33
9-1/4"	37	40	42
11-1/4"	45	49	51

PBS Panel Weights

Type I modified EPS core

Core Thickness	OSB Skin Thickness		
	7/16"	5/8"	3/4"
3-1/2"	3.3	4.6	5.5
5-1/2"	3.5	4.8	5.7
7-1/4"	3.7	5.0	5.9
9-1/4"	3.9	5.2	6.1
11-1/4"	4.0	5.4	6.2

Load Charts with a Built in Safety Factor
(Refer to current Listing Reports for up to date load tables)

All of Premier's load charts have a built-in safety factor. We have taken our SIPs products' ultimate load at failure and divided this number by 3. The result is then used as the design load value.

Table 1: Maximum Allowable Uniform Transverse Load (psf) – Type S Panels[1,3]

Panel Core Thickness (in)	Deflection Limit[2]	Panel Span (ft)									
		4[4]	8	10	12	14	16	18	20	22	24
3.5	L/360	100	43	29	21	16	10				
	L/240	143	60	42	33	25	16				
	L/180	143*	61*	57	46	34	22				
5.5	L/360	105	52	39	30	24	18	15	11		
	L/240	162	78	58	36	32	28	22	16		
	L/180	191*	80*	60*	46*	40	34	29	21		
7.25	L/360	120	61	60	42	34	26	21	15	13	11
	L/240	179*	85*	75*	61	50	39	31	23	21	18
	L/180	179*	85*	75*	69*	60*	50*	42	31	28	24
9.25	L/360	131	80	66	52	43	33	28	22	20	18
	L/240	168*	86*	71*	57*	51*	46*	42*	34	30	26
	L/180	168*	86*	71*	57*	51*	46*	42*	39*	37*	34*
11.25	L/360	132	94*	76*	51	50	48	38	28	24	20
	L/240	163*	94*	76*	59*	55*	51*	45*	39*	36*	31
	L/180	163*	94*	76*	59*	55*	51*	45*	39*	36*	33*

[1] Table values assume a simply supported panel with 1.5 in. of continuous bearing on facing at supports. Permanent loads, such as dead load, shall not exceed 0.25 times the tabulated load. Panels shall use OSB surface splines not less than 7/16 in. thick inserted below the facing on each side of the panel.
[2] Deflection limit shall be selected by building designer based on the serviceability requirements of the structure and the requirements of adopted building code.
[3] Tabulated values for 8 ft walls apply to panels constructed with the OSB strength axis oriented either parallel or perpendicular to supports. Tabulated values for other lengths are based on the strong-axis of the facing material oriented parallel to the span direction.
[4] Panels spanning 4 ft shall be a minimum of 8 ft long spanning a minimum of two 4 ft spans. No single span condition is allowed.
[5] For wall panel capacities utilizing a zero bearing configuration (Figure 2), the allowable load shall be determined using C_v=0.86.
*An asterisk (*) indicates the value shown is governed by the average peak load divided by 3.

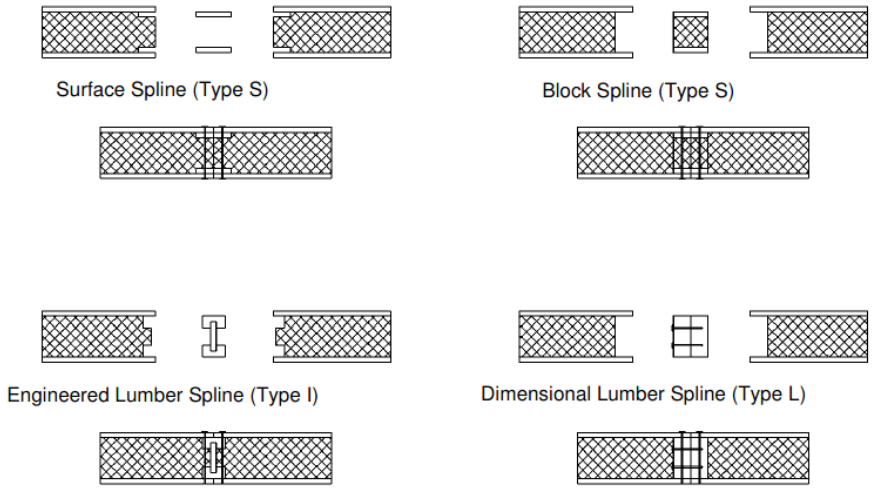


Figure 1: SIP Spline Types

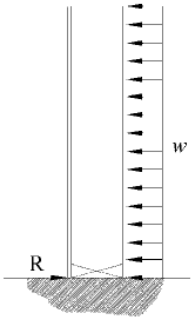


Figure 2: Zero Bearing Support

Table 2: Maximum Allowable Uniform Transverse Load (psf) – Type I Panels[1,3]

Panel Core Thickness (in)	Deflection Limit[2]	Panel Span (ft)									
		4[4]	8	10	12	14	16	18	20	22	24
7.25	L/360	132	136	93	60	50	40	31	21	19	16
	L/240	318*	148*	107*	91	75	59	45	31	27	23
	L/180	318*	148*	107*	92*	87	78	60	41	36	30
9.25	L/360	197	164*	124*	72	67	61	48	34	29	24
	L/240	336*	164*	124*	107*	96	84*	70	49	43	36
	L/180	336*	164*	124*	107*	96	84*	76	65	56	47
11.25	L/360	258	143*	103*	86	83	77*	61	42	37	32
	L/240	318*	143*	103*	93*	85	77*	68	59*	54	46
	L/180	318*	143*	103*	93*	85	77*	68	59*	54	49*

[1] Table values assume a simply supported panel with 1.5 in. of continuous bearing on facing at supports. Permanent loads, such as dead load, shall not exceed 0.25 times the tabulated load. Splines consist of one wood I-beam, 2.25 in. wide flange (minimum) with a depth equal to the core thickness, spaced not to exceed 48 in. on center.

[2] Deflection limit shall be selected by building designer based on the serviceability requirements of the structure and the requirements of adopted building code.

[3] Tabulated values for 8 ft walls apply to panels constructed with the OSB strength axis oriented either parallel or perpendicular to supports. Tabulated values for other lengths are based on the strong-axis of the facing material oriented parallel to the span direction.

[4] Panels spanning 4 ft shall be a minimum of 8 ft long spanning a minimum of two 4 ft spans. No single span condition is allowed.

*An asterisk (*) indicates the value shown is governed by the average peak load divided by 3.

Table 3: Maximum Allowable Uniform Transverse Load (psf) – Type L Panels[1,3]

Panel Core Thickness (in)	Deflection Limit[2]	Panel Span (ft)									
		4[4]	8	10	12	14	16	18	20	22	24
3.5	L/360	103	45	33	24	18	11				
	L/240	225	68	47	34	26	17				
	L/180	297*	91	61	45	34	23				
5.5	L/360	307*	129	57	42	34	25	20	15		
	L/240	307*	182*	87	61	49	37	30	22		
	L/180	307*	182*	112*	80	65	49	39	29		
7.25	L/360	253	171	82	66	54	41	32	23		
	L/240	288*	188*	128	100	81	61	48	35		
	L/180	288*	188*	133*	117*	105	80	63	45		
9.25	L/360	286	188*	117	101	80	58	47	36	32	27
	L/240	326*	188*	147*	134*	120	90	71	52	47	41
	L/180	326*	188*	147*	134*	121	108*	93	68	61	53
11.25	L/360	327*	188*	167*	141	116	91	75	58	47	36
	L/240	327*	188*	167*	153*	132	110*	97	83*	69	53
	L/180	327*	188*	167*	153*	132	110*	97	83*	83	70

[1] Table values assume a simply supported panel with 1.5 in. of continuous bearing on facing at supports. Permanent loads, such as dead load, shall not exceed 0.25 times the tabulated load. Splines consist of #2 or better, Hem-Fir, 1.5 in. wide with a depth equal to the core thickness, spaced to provide not less than two members for every 48 in. of panel width.
[2] Deflection limit shall be selected by building designer based on the serviceability requirements of the structure and the requirements of adopted building code.
[3] Tabulated values for 8 ft walls apply to panels constructed with the OSB strength axis oriented either parallel or perpendicular to supports. Tabulated values for other lengths are based on the strong-axis of the facing material oriented parallel to the span direction.
[4] Panels spanning 4 ft shall be a minimum of 8 ft long spanning a minimum of two 4 ft spans. No single span condition is allowed.
*An asterisk (*) indicates the value shown is governed by the average peak load divided by 3.

Table 4: Maximum Allowable Uniform Axial Load (plf) – Type S Panels[1,2,3,4]

Panel Core Thickness (in)	Panel Span (ft)					
	8	10	12	16	20	24
3.5	3500	2553	2453	2117		
5.5	4250	4043	3373	3923	2817	2183
7.25	4917	4327	4473	4197	3497	3067
9.25	4600	4414	4228	4417	3389	3248
11.25	3889	3959	4028	4408	3837*	3333

[1] Splines consist of OSB surface splines not less than 7/16 in. thick inserted below the facing on each side of the panel. Permanent loads, such as dead load, shall not exceed 0.50 times the tabulated load.
[2] Uniform Axial loads may be applied in accordance with Section 5.5.1. Concentrated point loads shall be addressed in accordance with Section 5.5.2 and Table 6.
[3] Both facings must bear on the supporting foundation or structure.
[4] Tabulated values for 8 ft walls apply to panels constructed with the OSB strength axis oriented either parallel or perpendicular to supports.
* Limited by 1/8 in. deflection (compression)

Table 5: Maximum Allowable Uniform Axial Loads (plf) – Type L Panels[1,2,3,4]

Panel Core Thickness (in)	Panel Span (ft)					
	8	10	12	16	20	24
3.5	4723	3903	3273	2623		
5.5	5850	5890	4277	4310	2933	2837
7.25	6807	6110	5557	5180	4837	4083
9.25	5473	5709	5946	5948	4729*	4250
11.25	5667	5474	5281	5775*	4729*	4223

[1] Splines consist of #2 or better, Hem-Fir, 1.5 in. wide with a depth equal to the core thickness, spaced to provide not less than two members for every 48 in. of panel width. Permanent loads, such as dead load, shall not exceed 0.50 times the tabulated load.
[2] Axial loads shall be applied concentrically to the top of the panel through repetitive members spaced not more than 24 in. on center. Such members shall be fastened to a rim board or similar member to distribute along the top of the SIP panel.
[3] Both facings must bear on the supporting foundation or structure.
[4] Tabulated values for 8 ft walls apply to panels constructed with the OSB strength axis oriented either parallel or perpendicular to supports.
* Limited by 1/8 in. deflection (compression)

Table 6: Maximum Allowable Axial Compression Point Loads (lbs) – Type S Panels[1,2,3,4]

Top Plate Configuration	1.5" Minimum Bearing Width	3" Minimum Bearing Width
Single 2x4 #2 or Better Hem-Fir Plate	2040	2450
Single 2x4 #2 or Better Hem-Fir Plate with 1-1/8 in. wide, 1.3E Rim Board Cap Plate	4030	4678

[1] Top plate secured to facings as required in Section 6.3
[2] Permanent loads, such as dead load, shall not exceed 0.50 times the tabulated load.
[3] Concentrated loads shall be applied concentrically to the top of the panel.
[4] Tabulated values are based on the strong-axis of the facing material oriented parallel to the span direction.

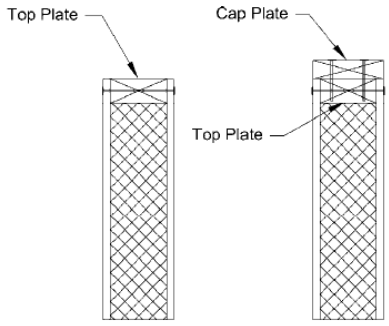


Figure 3: Top Plate Configurations

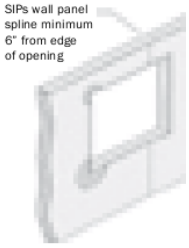
Table 7: Maximum Allowable Uniform SIP Header Vertical Loads (plf)
3-1/2 in. through 11-1/4 in. Core Thickness[1,2]

Header Depth[3] (in)	Deflection Limit[4]	Header Span (ft)			
		4	6	8	10
12	L/480	740	384	228	142
	L/360	740	384	229	142
	L/240	740	384	229	142
18	L/480	798	574	385	311
	L/360	798	574	385	311
	L/240	798	574	385	311
24	L/480	886	629	429	361
	L/360	886	629	429	361
	L/240	886	629	429	361

[1] Vertical loads only. Lateral loads shall be transferred to the edges of the openings through continuous plate(s) designed in accordance with accepted engineering practice. Permanent loads, such as dead load, shall not exceed 0.50 times the tabulated load.
[2] Tabulated values are based on the strong-axis of the facing material oriented perpendicular to the direction of header span.
[3] Minimum depth of facing above opening.
[4] Deflection limit shall be selected by building designer based on the serviceability requirements of the structure and the requirements of adopted building code.

Table 8: Maximum Allowable Uniform Header Loads (plf)
(Panel Splice a minimum of 6 in. from edge of opening) 3-1/2 in. through 11-1/4 in. Core Thickness[1,2]

Header Depth[3] (in)	Deflection Limit[4]	Header Span (ft)			
		4	6	8	10
12	L/480	345	243	156	99
	L/360	450	295	190	125
	L/240	630	382	236	153
18	L/480	705	388	254	235
	L/360	750	482	302	281
	L/240	750	482	302	281
24	L/480	698	556	368	350
	L/360	896	556	368	350
	L/240	896	556	368	350



[1] Vertical loads only. Lateral loads shall be transferred to the edges of the openings through continuous plate(s) designed in accordance with accepted engineering practice. Permanent loads, such as dead load, shall not exceed 0.50 times the tabulated load.
[2] Tabulated values are based on the strong-axis of the facing material oriented perpendicular to the direction of header span.
[3] Minimum depth of facing above opening.
[4] Deflection limit shall be selected by building designer based on the serviceability requirements of the structure and the requirements of adopted building code.

Table 9: Allowable In-Plane Shear Strength (Pounds per Foot) for SIP Shear Walls 3.5 in. through 11.25 in. core thickness Wind and Seismic Loads in Seismic Design Categories A, B and C[1,2]

Spline Type[3]	Framing Minimum SG[4]	Minimum Facing Connections[2]			Shear Strength (plf)
		Chord[2]	Plate[2]	Spline[3]	
Block, Surface or Lumber Spline (Type S, Type L)	0.50	0.113"x 2-1/2" nails, 6" oc	0.113"x 2-1/2" nails, 6" oc	(7/16" thick, 3" wide spline) 0.113"x 2-1/2" nails, 6" oc	410
	0.50	0.113"x 2-3/8" nails, 6" oc stagger (2 rows)	0.113"x 2-3/8" nails, 6" oc	(7/16" thick, 4" wide spline) 0.113"x 2-3/8" nails, 6" oc	460
	0.42	0.113"x 2-3/8" nails, 6" oc stagger (2 rows)	0.113"x 2-3/8" nails, 6" oc stagger (2 rows)	(7/16" thick, 4" wide spline) 0.113"x 2-3/8" nails, 4" oc	700
	0.42	0.148"x 2-3/8" nails, 6" oc stagger (2 rows)	0.148"x 2-3/8" nails, 3" oc	(23/32" thick, 4" wide spline) 0.148"x 2-3/8" nails, 3" oc stagger (2 rows)	1000

[1] Maximum in-plane shear dimension ratio shall not exceed 2:1 (height : width) for resisting wind or seismic loads.
[2] Chords, hold-downs and connections to other structural elements must be designed by a registered design professional in accordance with accepted engineering practice.
[3] Spline type at interior panel-to-panel joints only, solid chord members are required at each end of each shear wall segment.
[4] Required connections must be made on each side of the panel. Dimensional or engineered lumber shall have an equivalent specific gravity not less than specified.

Table 10: Allowable In-Plane Shear Strength (Pounds per Foot) for SIP Shear Walls (Seismic Loads in Seismic Design Categories A, B, C, D, E and F)[1,2]

Spline Type[3]	Framing Minimum SG[4]	Minimum Facing Connections[2]			Shear Strength (plf)
		Chord[2]	Plate[2]	Spline[3]	
Block, Surface, or Lumber Spline (Type S, Type L)	0.50	0.113"x 2-1/4" nails, 6" oc	0.113"x 2-1/4" nails, 3" oc	(7/16" thick, 3" wide spline) 0.113"x 2-1/4" nails, 6" oc	360
	0.50	0.113"x 2-1/4" nails, 6" oc	0.113"x 2-1/4" nails, 6" oc	(3/4" thick, 3" wide spline) 0.113"x 2-1/4" nails, 6" oc	360
Block, Surface, or Lumber Spline (Type S, Type L)	0.50	0.113" x 2-3/8" nails, 3" oc Staggered (3/8" edge distance and 3/4" edge distance)	0.113" x 2-3/8" round head nails, 3" oc Staggered (3/8", 3/4" edge distance)	(23/32" thick, 3" wide spline) 0.113" x 2-3/8" nails, 3" oc Staggered (3/8" edge distance and 3/4" edge distance)	720
Block, Surface, or Lumber Spline (Type S, Type L)	0.50	0.113" x 2-3/8" nails, 2" oc Staggered (3/8" edge distance and 3/4" edge distance)	0.113" x 2-3/8" round head nails, 2" oc Staggered (3/8", 3/4" edge distance)	(23/32" thick, 3" wide spline) 0.113" x 2-3/8" nails, 2" oc Staggered (3/8" edge distance and 3/4" edge distance)	920

[1] Maximum in-plane shear dimension ratio are defined in Section 5.8.2.
[2] Chords, hold-downs and connections to other structural elements must be designed by a registered design professional in accordance with accepted engineering practice.
[3] Spline type at interior panel-to-panel joints only, solid chord members are required at each end of each shear wall segment.
[4] Required connections must be made on each side of the panel. Dimensional or engineered lumber shall have an equivalent specific gravity not less than specified.

Table 11: Maximum Allowable In-Plane Shear (Pounds per Foot)
For Diaphragms Subjected to Wind or Seismic Loading[1]

Minimum Connections[2]				Shear Strength (plf)	Max. Aspect Ratio
Interior Supports[2] (Figure 4a)	Surface Spline[3] (Figure 4b)	Boundary[4] (Figure 4c)			
		Support	Spline		
PBS #14 Panel Screw with 1" penetration 12" oc	0.113" x 2.5" nails, 3" oc 7/16" x 4" OSB Spline	PBS #14 Panel Screw with 1" penetration 12" oc	0.113" x 2.5" nails, 6" oc	430	4:1
PBS #14 Panel Screw with 1" penetration 12" oc	0.113" x 2.5" nails, 3" oc, 2 rows, staggered 7/16" x 4" OSB Spline	PBS #14 Panel Screw with 1" penetration 3" oc	0.113" x 2.5" nails, 4" oc	530	4:1
PBS #14 Panel Screw with 1" penetration 2" oc	0.113" x 2.5" nails, 3" oc, 2 rows, staggered 7/16" x 4" OSB Spline	PBS #14 Panel Screw with 1" penetration 2" oc	0.113" x 2.5" nails, 1.5" oc	750	4:1
PBS #14 Panel Screw with 1" penetration 4" oc	0.113" x 2.5" nails, 3" oc, 2 rows, staggered 7/16" x 4" OSB Spline	PBS #14 Panel Screw with 1" penetration 4" oc	0.113" x2 .5" nails, 3" oc	915	3:1
PBS #14 Panel Screw with 1" penetration 4" oc	0.113" x 2.5" nails, 6" oc, 2 rows, staggered 23/32" x 4" OSB Spline	PBS #14 Panel Screw with 1" penetration 4" oc	0.113" x 2.5" nails, 6" oc	1130	3:1

[1] The maximum diaphragm length-to-width ratio of shall not exceed 4:1. Load may be applied parallel to continuous panel joints.
[2] Interior supports shall be spaced not to exceed 12 ft on center and have a minimum width of 3.5 in. and a specific gravity of 0.42 or greater. Specified fasteners are required on both sides of panel joint where panels are joined over a support. See Figure 4a.
[3] Top spline only, at interior panel-to-panel joints. Specified fasteners are required on both sides of panel joint. See Figures 4b.
[4] Boundary spline shall be solid 1.5 inch wide, minimum, and have a specific gravity of 0.42 or greater. Boundary supports shall have a minimum width of 3.5 in. and a specific gravity of 0.42 or greater. Specified spline fasteners are required through both facings. See Figure 4c.

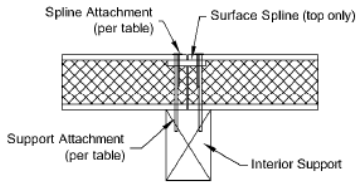


Figure 4a: Interior Support

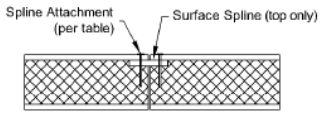


Figure 4b: Surface Spline

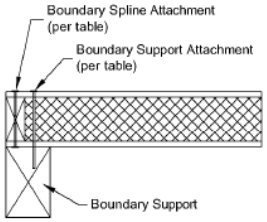


Figure 4c: Boundary

Figure 4: Diaphragm Connection Types

Table 12: Fire Rated Assemblies[1]

Designation	Orientation	Type	Rating	Directory
U524	Vertical	Bearing Wall	1-Hour	Underwriters Laboratories
P517	Horizontal	Ceiling	1-Hour	Underwriters Laboratories
P822	Horizontal	Floor/Ceiling	1-Hour	Underwriters Laboratories
PRS021109-24	Vertical	Bearing Wall	1-Hour	NTA, Inc.
PRS021109-23	Horizontal	Ceiling	1-Hour	NTA, Inc.

[1] Construction details and assembly status shall be obtained from the fire resistance directory of the noted organization. NTA, Inc. assemblies may be obtained from www.ntainc.com.

Table 13: Wind Speed vs. Pressure

Wall Loads (psf) - End Zone (Zone 5) for 100sf to 500 sf effective wind area												
Mean Roof Height (ft)	90 MPH			100 MPH			110 MPH			120 MPH		
	Exp B	Exp C	Exp D	Exp B	Exp C	Exp D	Exp B	Exp C	Exp D	Exp B	Exp C	Exp D
15	-15.1	-18.3	-22.2	-18.7	-22.6	-27.5	-22.6	-27.3	-33.2	-26.9	-32.5	-39.5
20	-15.1	-19.5	-23.4	-18.7	-24.1	-29.0	-22.6	-29.2	-35.0	-26.9	-34.7	-41.7
25	-15.1	-20.4	-24.3	-18.7	-25.2	-30.1	-22.6	-30.5	-36.4	-26.9	-36.3	-43.3
30	-15.1	-21.1	-25.1	-18.7	-26.2	-31.0	-22.6	-31.6	-37.5	-26.9	-37.7	-44.7
35	-15.9	-21.9	-25.7	-19.6	-27.1	-31.8	-23.7	-32.8	-38.4	-28.2	-39.0	-45.7
40	-16.5	-22.5	-26.3	-20.4	-27.9	-32.5	-24.6	-33.7	-39.3	-29.3	-40.1	-46.8
45	-16.9	-23.1	-26.9	-20.9	-28.6	-33.3	-25.3	-34.6	-40.2	-30.1	-41.2	-47.9
50	-17.5	-23.6	-27.3	-21.7	-29.2	-33.8	-26.2	-35.3	-40.9	-31.2	-42.0	-48.7
55	-18.0	-24.0	-27.8	-22.3	-29.7	-34.4	-26.9	-35.9	-41.6	-32.0	-42.8	-49.5
60	-18.4	-24.5	-28.2	-22.8	-30.3	-35.0	-27.6	-36.6	-42.3	-32.8	-43.6	-50.3
Net Design wind pressure	-15.1			-18.7			-22.6			-26.9		

Wall Loads (psf) - End Zone (Zone 5) for 100sf to 500sf effective wind area												
Mean Roof Height (ft)	130 MPH			140 MPH			150 MPH			170 MPH		
	Exp B	Exp C	Exp D	Exp B	Exp C	Exp D	Exp B	Exp C	Exp D	Exp B	Exp C	Exp D
15	-31.6	-38.2	-46.5	-36.7	-44.4	-53.9	-42.1	-50.9	-61.9	-54.1	-65.5	-79.5
20	-31.6	-40.8	-49.0	-36.7	-47.3	-56.9	-42.1	-54.3	-65.3	-54.1	-69.8	-83.9
25	-31.6	-42.7	-50.9	-36.7	-49.5	-59.1	-42.1	-56.8	-67.8	-54.1	-73.0	-87.1
30	-31.6	-44.2	-52.5	-36.7	-51.4	-60.9	-42.1	-58.9	-69.9	-54.1	-75.7	-89.8
35	-33.2	-45.8	-53.7	-38.5	-53.2	-62.4	-44.2	-61.1	-71.6	-56.8	-78.4	-92.0
40	-34.4	-47.1	-55.0	-40.0	-54.7	-63.9	-45.9	-62.7	-73.3	-59.0	-80.6	-94.1
45	-35.4	-48.3	-56.2	-41.1	-56.2	-65.3	-47.2	-64.4	-74.9	-60.6	-82.8	-96.3
50	-36.7	-49.3	-57.2	-42.6	-57.3	-66.4	-48.8	-65.7	-76.2	-62.8	-84.4	-97.9
55	-37.6	-50.2	-58.1	-43.7	-58.4	-67.5	-50.1	-66.9	-77.5	-64.4	-86.0	-99.5
60	-38.6	-51.2	-59.1	-44.8	-59.5	-68.6	-51.4	-68.2	-78.7	-66.0	-87.6	-101.2
Net Design wind pressure	-31.6			-36.7			-42.1			-54.1		

More information on this chart can be found in Technical Bulletin #15 (www.premiersips.com).

Table 14: Premier Insul-Beam II Header Loads (plf)

No. of Trimmer Studs	Deflection	Header Span (ft.)						
		2'	3'	4'	5'	6'	7'	8'
1	L/480	3150	2100	1575	1260	1050	900	788
	L/360	3150	2100	1575	1260	1050	900	788
	L/240	3150	2100	1575	1260	1050	900	788
2	L/480	6300	4200	3150	2520	2100	1800	1545
	L/360	6300	4200	3150	2520	2100	1800	1575
	L/240	6300	4200	3150	2520	2100	1800	1575

No. of Trimmer Studs	Deflection	Header Span (ft.)							
		9'	10'	11'	12'	13'	14'	15'	16'
1	L/480	700	630	573	458	360	288	234	193
	L/360	700	630	573	525	480	384	313	257
	L/240	700	630	573	525	485	450	420	386
2	L/480	1085	791	594	458	360	288	234	193
	L/360	1400	1055	792	610	480	384	313	257
	L/240	1400	1245	792	864	720	577	469	386

Values listed for each deflection represent the least value of the bearing capacity of the trimmer, shear or bending capacity of the header or the actual deflection at the design load.
Refer to Technical Bulletin #30 for supporting headers in Premier SIPs wall panels (www.premiersips.com).
Note: Trimmer stud design capacities must be reviewed.

Premier SIPs Accessories

Premier has designed, developed and tested compatible accessories in order for your Premier SIP products to have the maximum performance. As the largest SIPs manufacturer in North America you can be sure that these accessories have proven themselves in the field year after year.

Accessories: Premier SIPs Screw Fasteners

Premier SIPs screw fasteners are factory made and supplied by Premier SIPs with your order. The fasteners were developed specifically for connecting Premier SIPs to each other, beams, purlins and posts of wood and light gauge metal.

Advantages:

- Corrosion resistant coating
- Excellent pull-out resistance
- State of the art tempering and coating technology
- Developed specifically for the attachment of Premier SIPs to beams, purlins, and posts of wood and light gauge metal
- Sizes from 5" to 18" in increments of 1"

SIPs Screw Fastener Specifications

Diameter, Thread & Point		
	Inches	**Millimeter**
Head Diameter	.635"	16.13mm
Thread Diameter	.255" / 2.45"	6.48mm / 6.22mm
Shank O.D.	.190" / .212"	4.83mm / 5.38mm

Premier SIPs Screw Length Guide (Roof Panel Size)

Pitch	4 1/2"	6 1/2"	8 3/8"	10 3/8"	12 3/8"
2/12	6"	8"	10"	12"	14"
4/12	6"	8"	10"	12"	14"
6/12	7"	9"	10"	12"	14"
8/12	7"	9"	11"	13"	15"
10/12	8"	10"	12"	14"	16"
12/12	8"	10"	12"	14"	16"

This chart will provide roughly a 1" penetration into the top plate.

Pull Out Strength: 1 inch penetration = 980 lbs.

Shear Capacity in Panels: 1 inch penetration > 830 lbs. (Failure of OSB occurs at this point)

These values are ultimate values. Appropriate safety factors should be applied to obtain design values.

Screw Fastener Capacities in OSB

In order to finish a project that utilizes Premier Panels for the walls and roof of the structure, many types of materials need to be fastened to the panels. These materials can include, siding, roofing materials, other structural elements, cabinets, and a host of other items.

In many of these applications screws are the preferred fasteners. Data on the pullout and lateral withdrawal capacities of screws into OSB have not been readily accessible. To help clarify the performance of screws installed in OSB, a major manufacturer of OSB, took it upon itself to generate data on various screws installed in OSB. The OSB was exposed to three different environments. Fifteen repetitions of both direct and lateral withdrawal of each screw type, in each of the three environmental conditions were conducted. The following tables summarize the lowest, ultimate average, value achieved for a particular screw type when installed in three different thicknesses of OSB.

Average Direct Withdrawl (Pullout) - lbs.

Screw Size	7/16" OSB	5/8" OSB	3/4" OSB
#6 Deck Screw	177	272	324
#8 Deck Screw	182	309	359
#10 Deck Screw	198	355	363
#12 Roofing Screw	190	312	360
#14 Roofing Screw	177	340	393

These values are ultimate values. Appropriate safety factors should be applied to obtain design values.

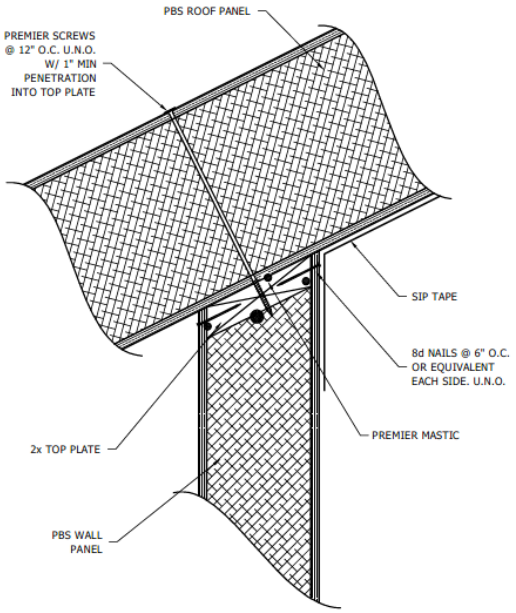
Average Lateral Withdrawl (Shear) - lbs.

Screw Size	7/16" OSB	5/8" OSB	3/4" OSB
#6 Deck Screw	198	273	295
#8 Deck Screw	118	197	224
#10 Deck Screw	143	260	301
#12 Roofing Screw	436	581	561
#14 Roofing Screw	466	630	797

These values are ultimate values. Appropriate safety factors should be applied to obtain design values.

Application:

- Dimensional 2x's require a minimum 1" penetration.
- Wall connections require that screws be used 2' o.c.
- Roof connections require that screws be used 1' o.c.
- Frequency of screw fasteners depend on the imposed loads that the SIPs panels must resist. Follow the requirements specified on your shop drawings.



Details

The following details are provided as a general guideline only. Details relating to your project will be provided on your project specific shop drawings. As with any individual design, engineering may dictate changes in panel details or configurations. Your final shop drawings should be reviewed in great detail to aid in assembly and root out design inconsistencies. The design professional, general and framing contractors all have a role in this important process.

General Details

Detail	Number Subject
PBS-001	Overview Section
PBS-002	Overview Section
PBS-003	Typical Timber Frame Details
PBS-004	Panel to Steel Connection
PBS-005	Premier Spline Connection
PBS-005a	Premier Spline Connection for Shearwalls
PBS-006	I-Joist Spline Connection
PBS-007	Double 2x Lumber Connection
PBS-008	Spline Fastened at Top Only
PBS-009	Panel to Plate Connection
PBS-010	Cap Plate
PBS-011	Wall Panel Corner Connection
PBS-012	Wall Panel Angled Corner
PBS-013	SIP Tape Application

Floor/Foundation Details

Detail	Number Subject
PBS-101	Recessed Sill Plate
PBS-102	Capillary Break on Slab
PBS-103	Panel/Foundation Connection
PBS-104	Hold Down Connection
PBS-105	Strap Hold Down Connection
PBS-106	Foundation Framing
PBS-107	Foundation Framing
PBS-108	Panel Floor Blocking
PBS-109	Floor Blocking
PBS-110	Platform Framing
PBS-111	Platform Framing

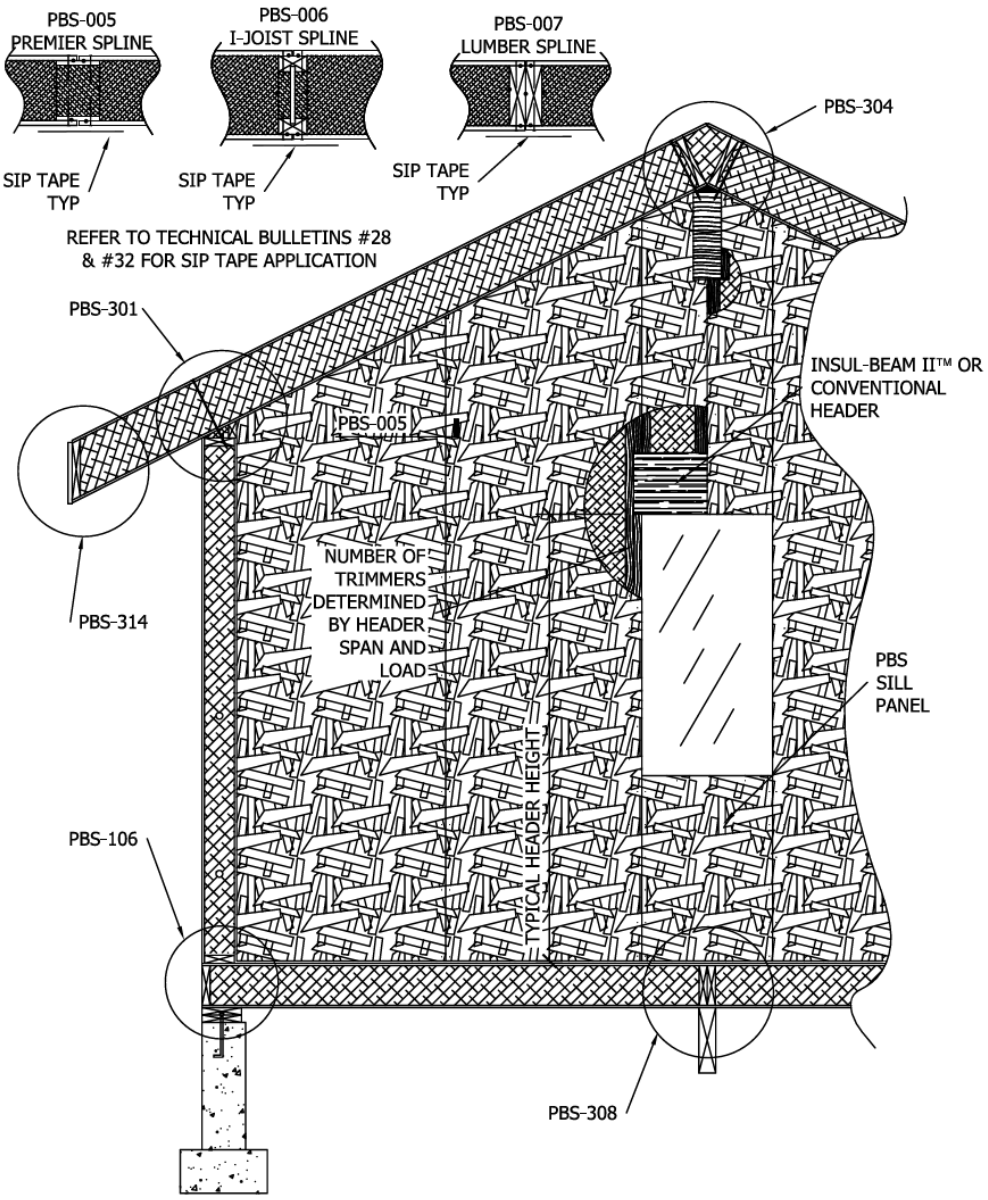
Wall Details

Detail	Number Subject
PBS-201	Insul-Beam Header
PBS-202	Panel as Header
PBS-203	Typical Panel Wall
PBS-204	Typical Opening Framing
PBS-205	Truss Bearing
PBS-206	Standard Electrical Chases
PBS-207	Electrical Box Installation
PBS-208	Interior Wall Connection
PBS-209	Typical Cabinet Connection
PBS-210	Island Vent Detail
PBS-211	Insul-Beam Above Opening

Roof Details

Detail	Number Subject
PBS-301	Beveled Block Wall/Roof
PBS-302	Beveled Block Wall/Roof
PBS-303	Beveled Wall/Roof Connection
PBS-304	Ridge Cap Detail
PBS-305	12:12 Pitch Ridge Detail
PBS-306	Roof Valley Connection
PBS-307	Parapet Detail
PBS-308	2x Panel Joint Connection
PBS-309	I-joist Panel Connection
PBS-310	Roof/Floor Openings
PBS-311	Roof Penetrations
PBS-312	Vented/Non-Vented Insul-Lam
PBS-313	Floor/Roof Fastening Patterns
PBS-314	Eave Details
PBS-315	Roof to ICF Wall Connection
PBS-316	Roof Ledger
PBS-317	Plumb Cut Ridge / Hip Ridge with Blocking
PBS-318	Plumb Cut Ridge / Hip Ridge without Blocking
PBS-319	Cantilevered Ridge with Blocking

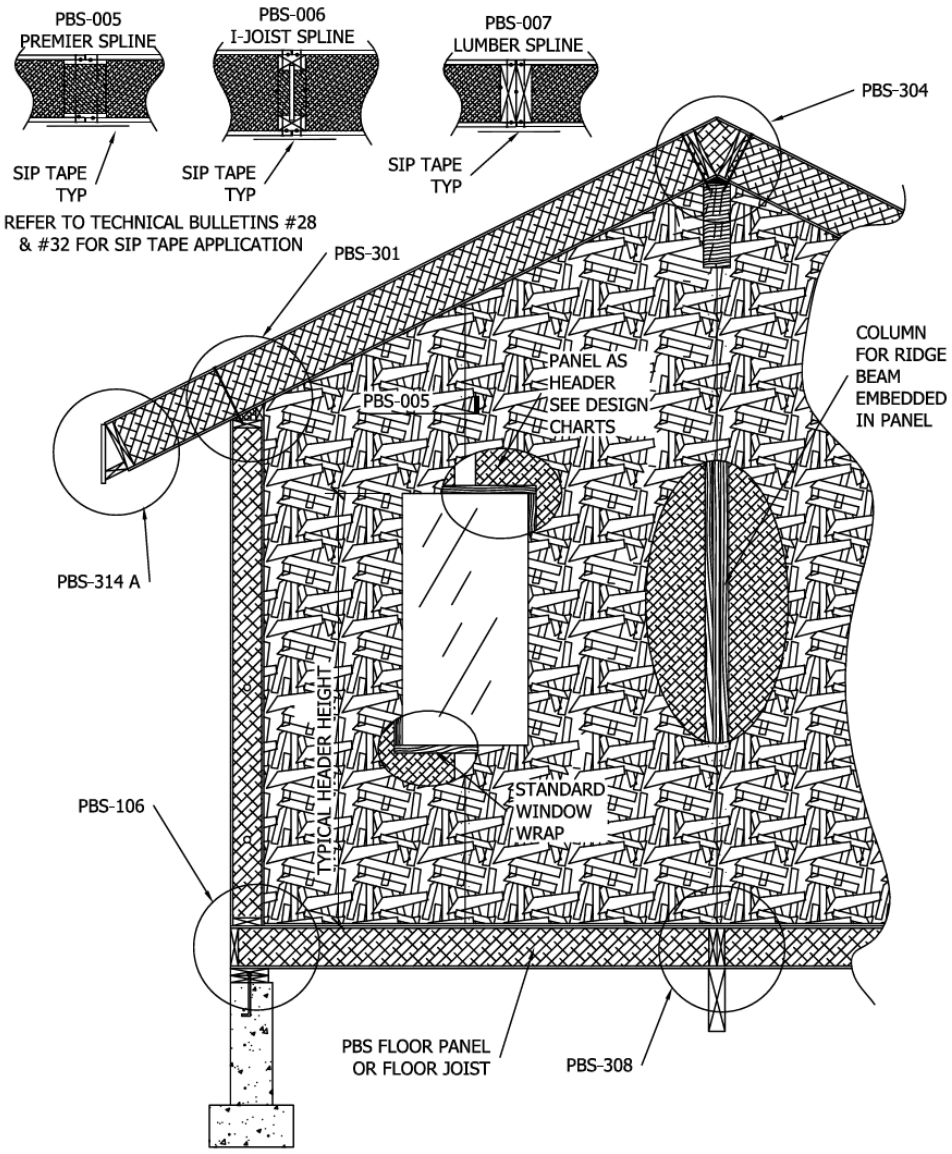
General Details: Overview 1 PBS-001



PBS-001 SECTION 11-9-10

PREMIER SIPS

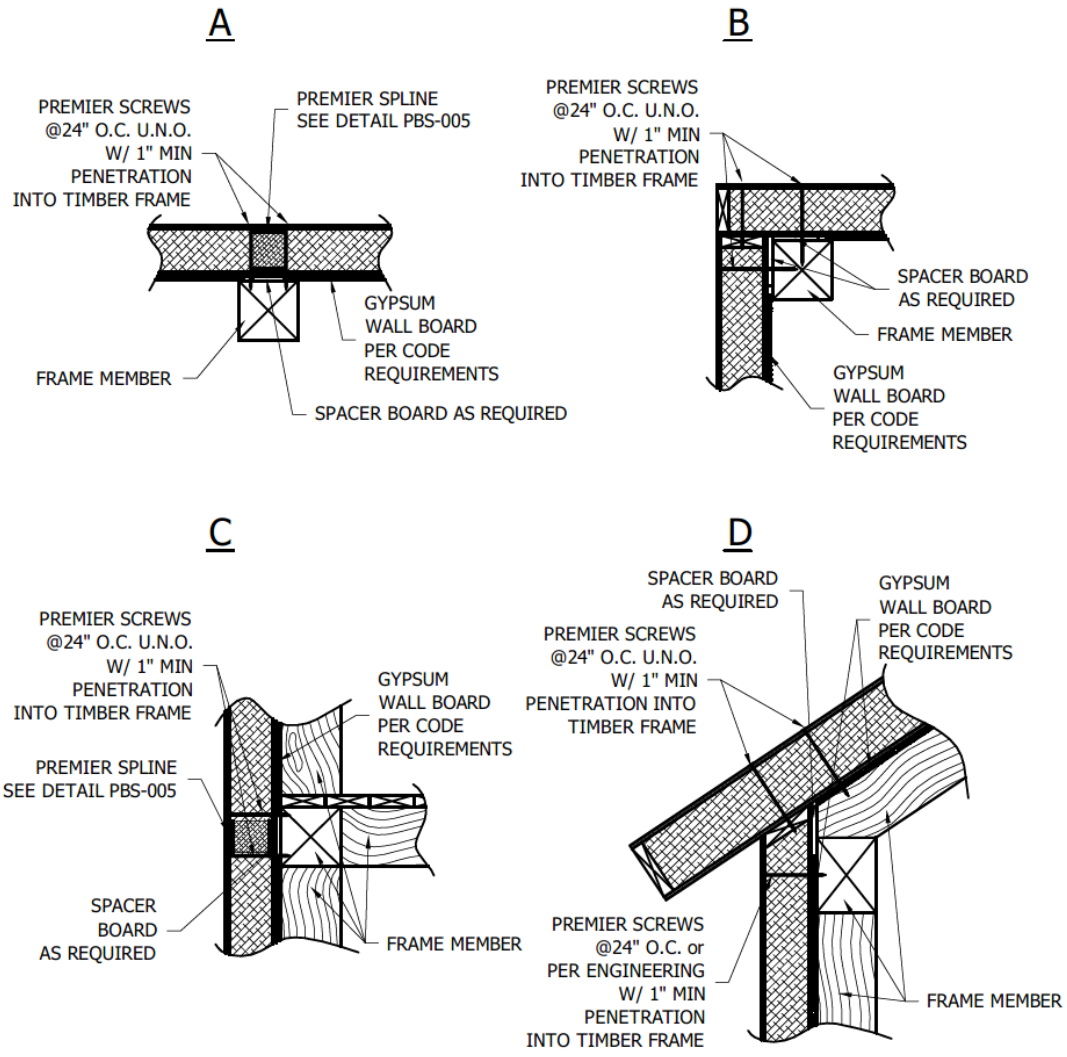
General Details: Overview 2 PBS-002



PBS-002 SECTION 11-9-10

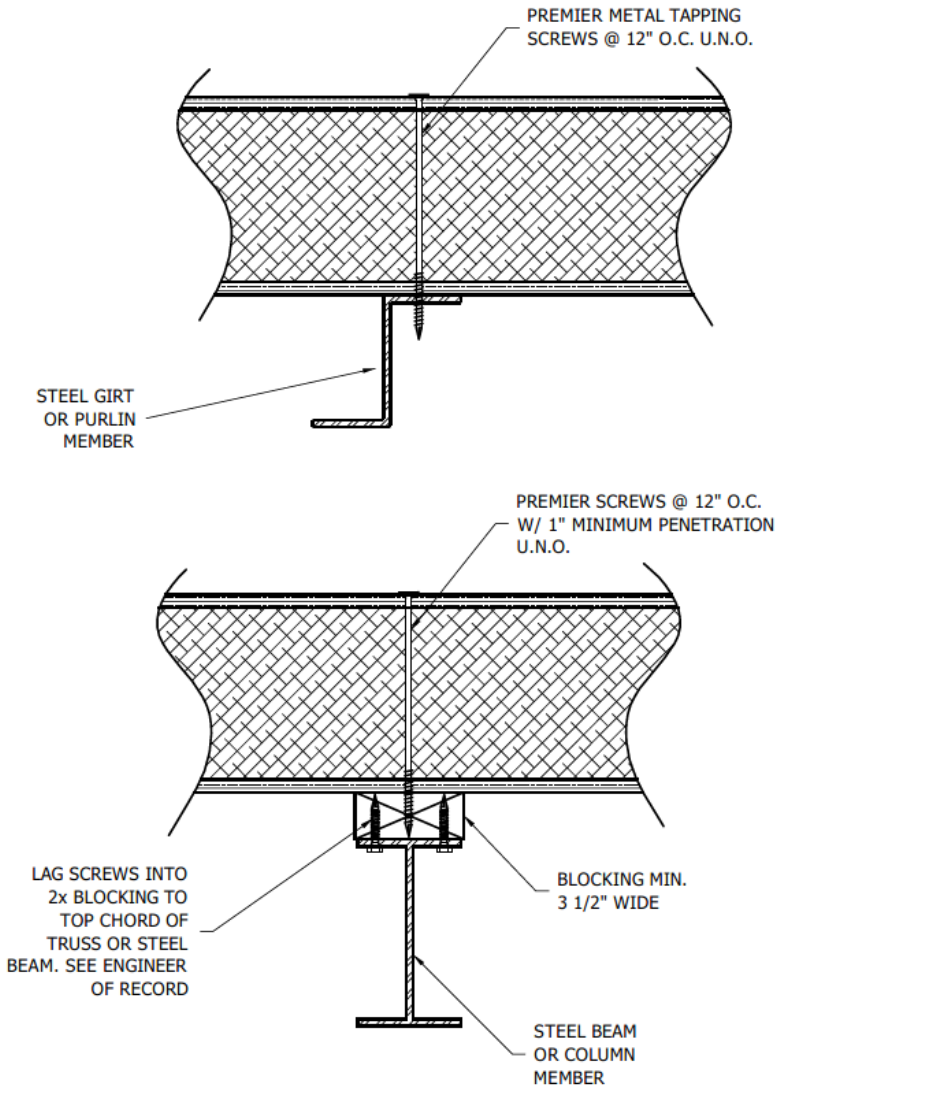
PREMIER SIPS

General Details: Typical Timber Frame PBS-003



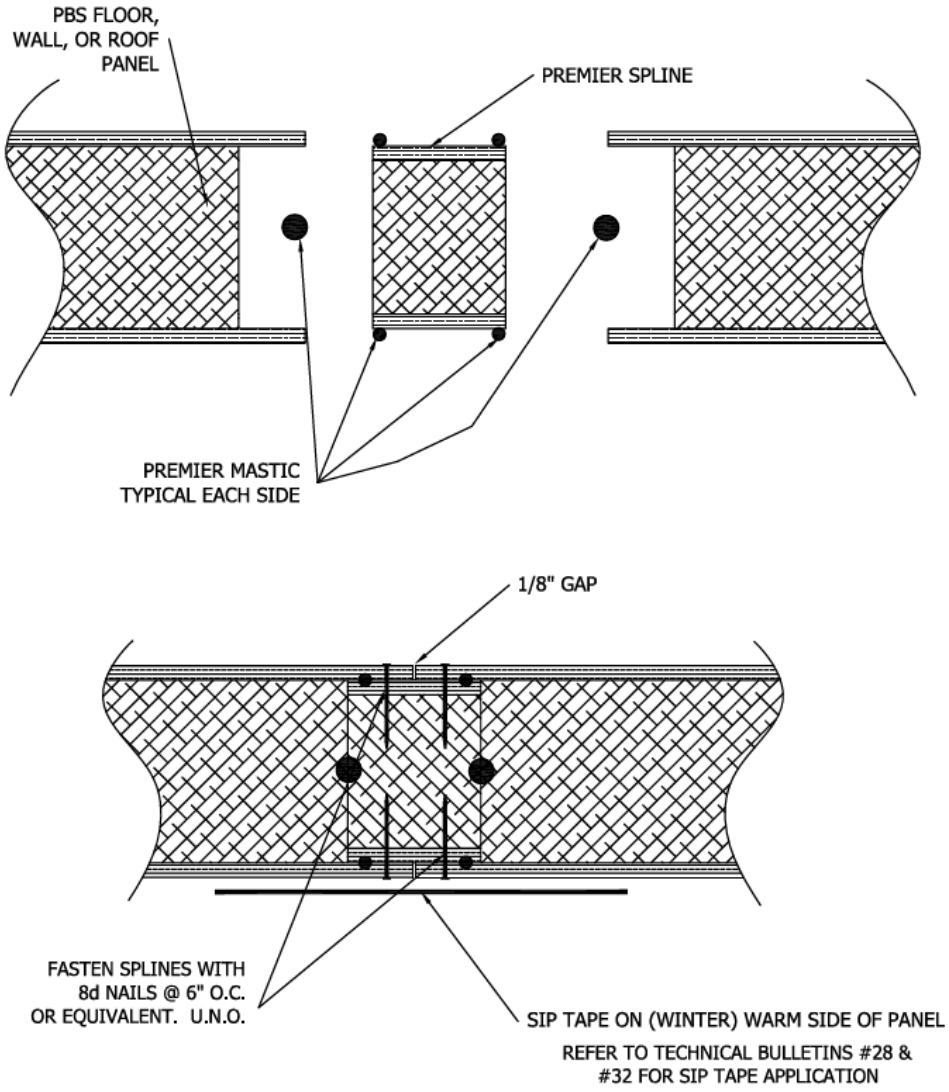
PBS-003 TYPICAL TIMBER FRAME DETAILS 8-16-07
PREMIER SIPS

General Details: Panel to Steel Connection PBS-004



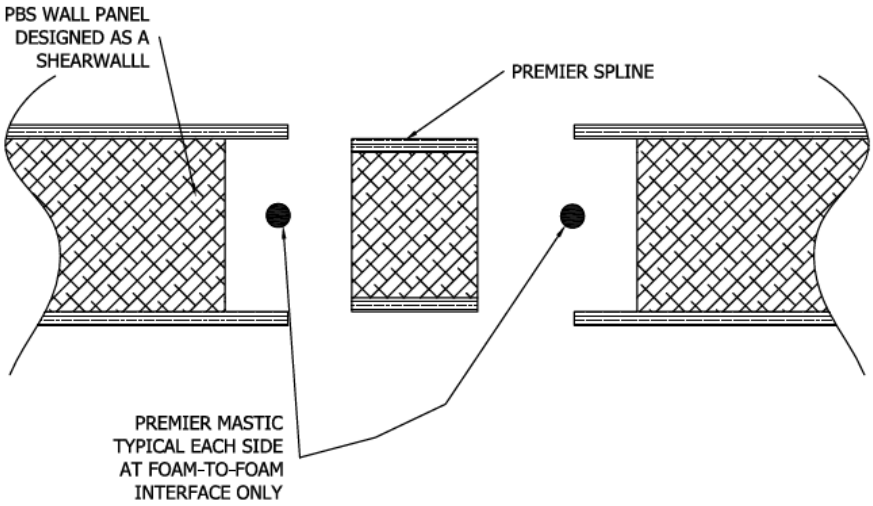
PBS-004 PANEL TO STEEL CONNECTION 8-16-07
PREMIER SIPS

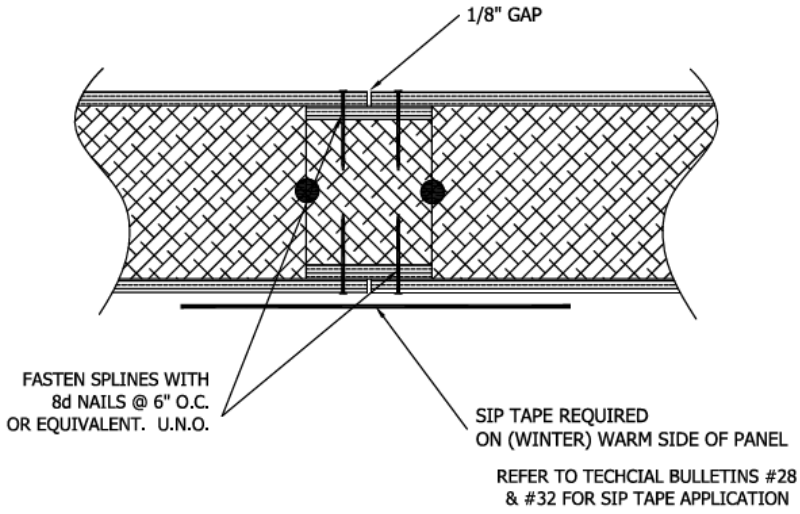
General Details: Spline Connection PBS-005



PBS-005 PREMIER SPLINE CONNECTION 11-9-10
PREMIER SIPS

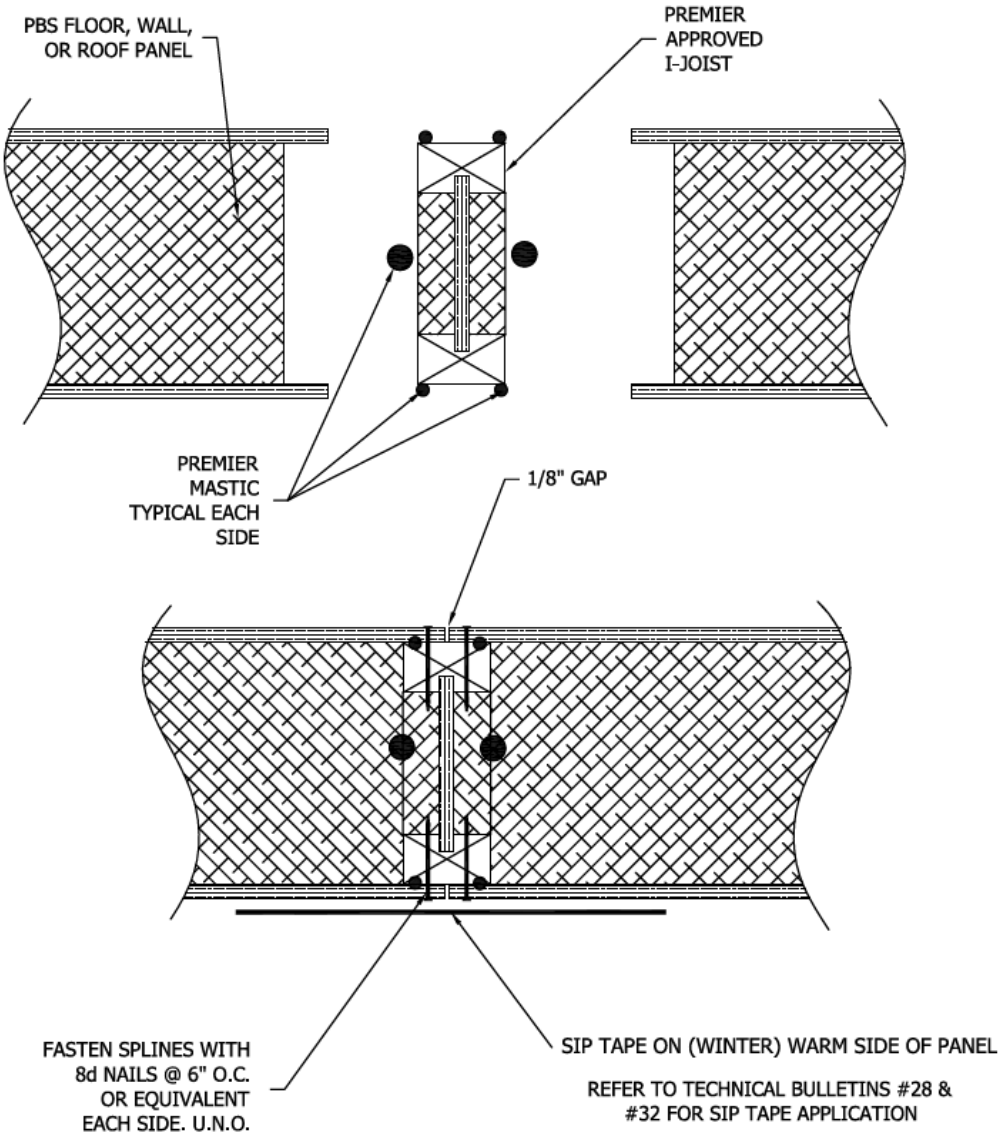
General Details: Spline Connection for Shearwalls PBS-005a





PBS-005a SPLINE CONNECTION FOR SHEARWALLS
PREMIER SIPS

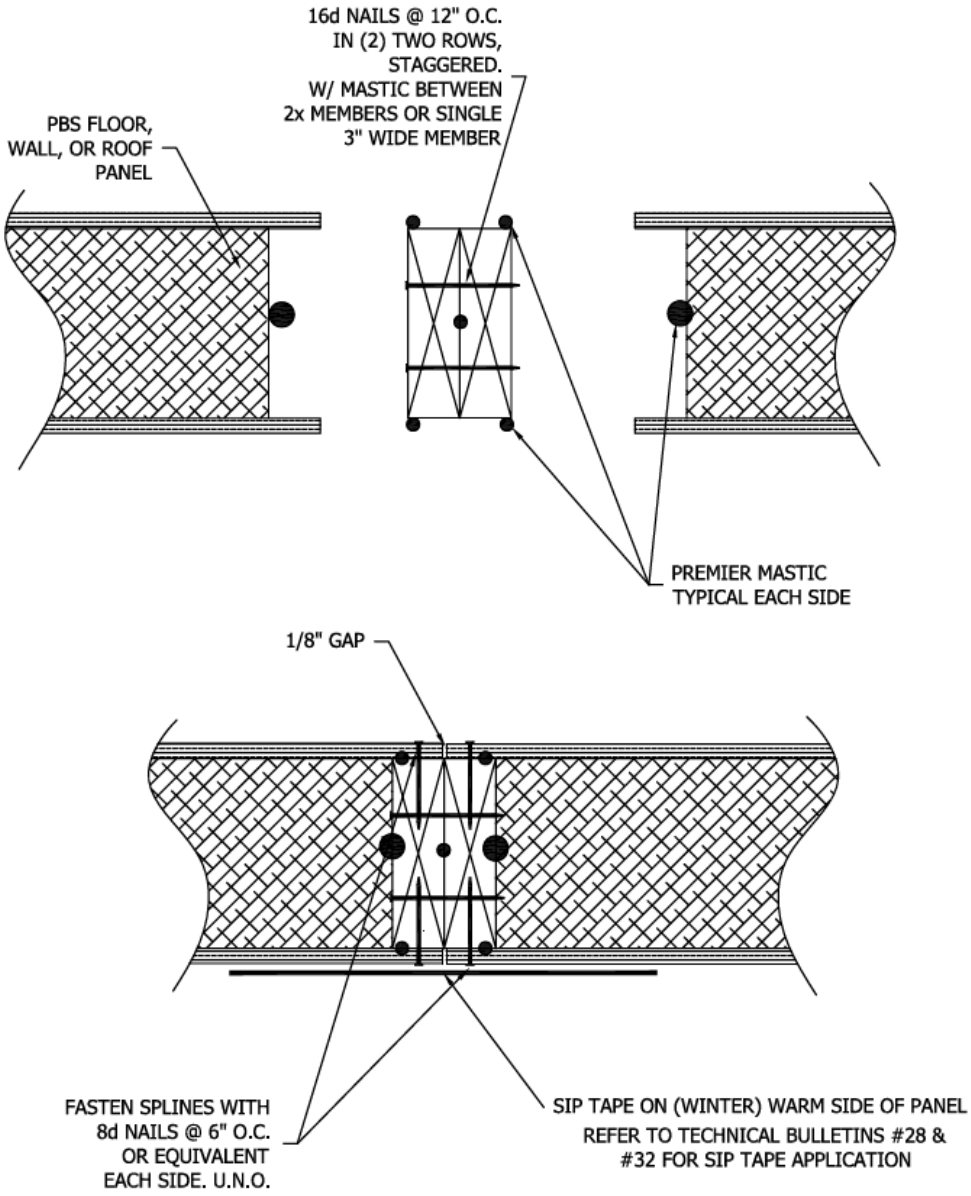
General Details: I-Joist Spline Connection PBS-006



PBS-006 I-JOIST SPLINE CONNECTION 11-9-10

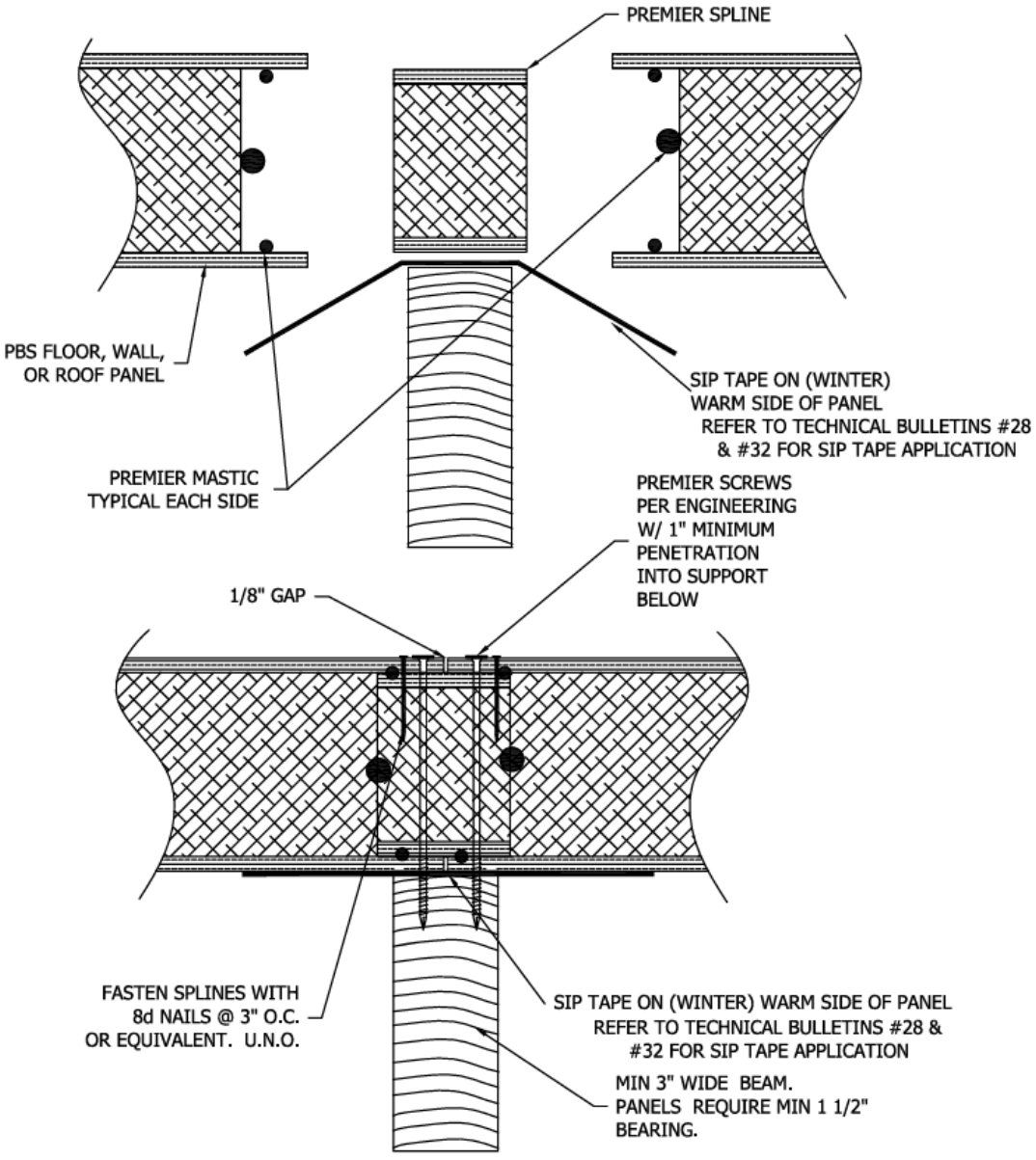
PREMIER SIPS

General Details: Double 2x Lumber Connection PBS-007



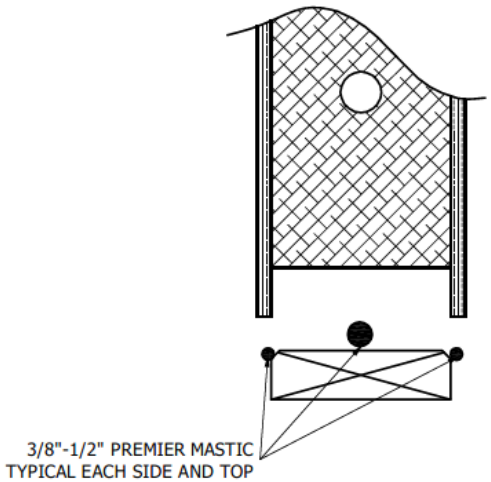
PBS-007 DOUBLE 2x LUMBER CONNECTION 11-9-10
PREMIER SIPS

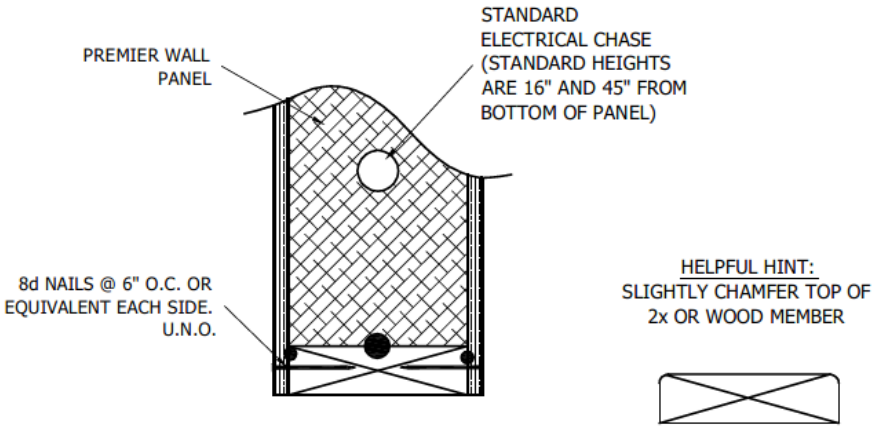
General Details: Spline Fastened at Top Only PBS-008



PBS-008 SPLINE FASTENED AT TOP ONLY 11-9-10
PREMIER SIPS

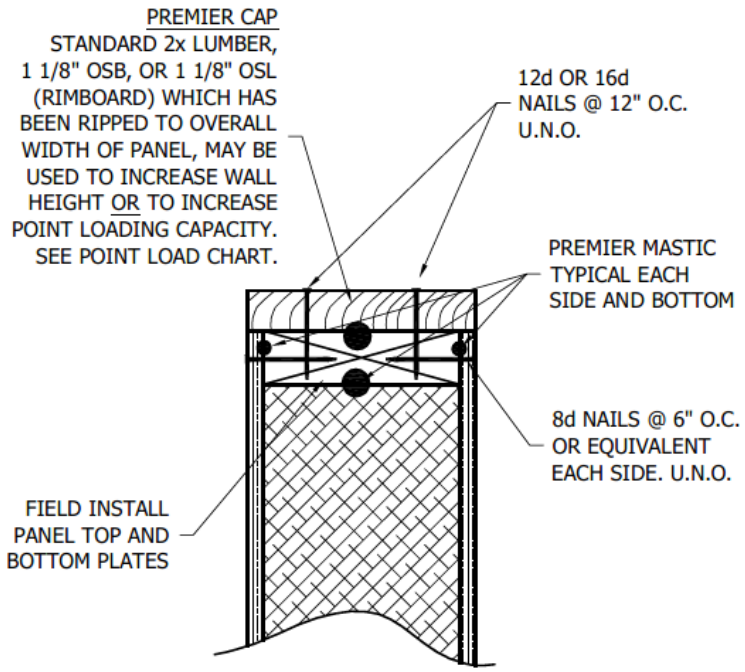
General Details: Panel to Plate Connection PBS-009





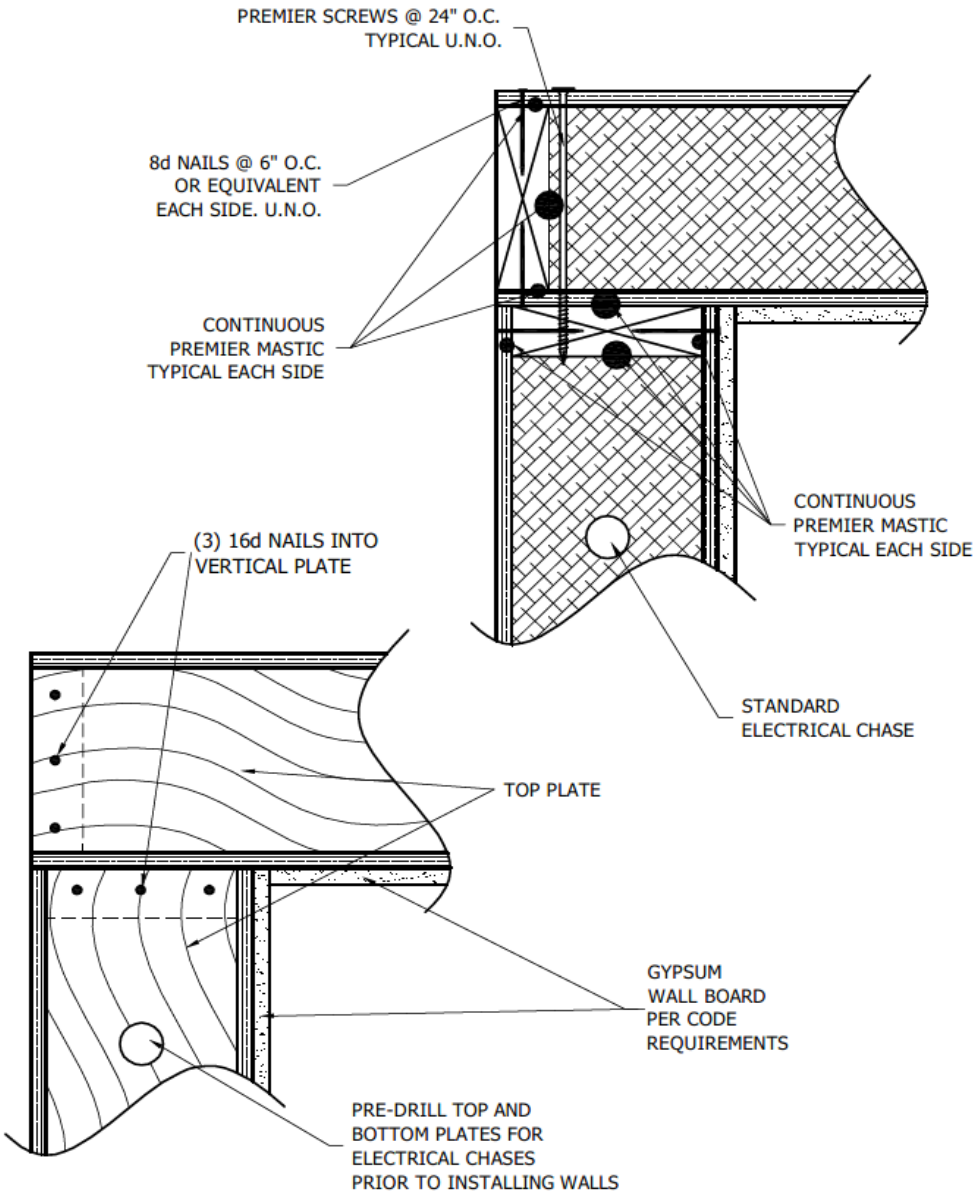
PBS-009 PANEL TO PLATE CONNECTION 8-16-07
PREMIER SIPS

General Details: Cap Plate PBS-010



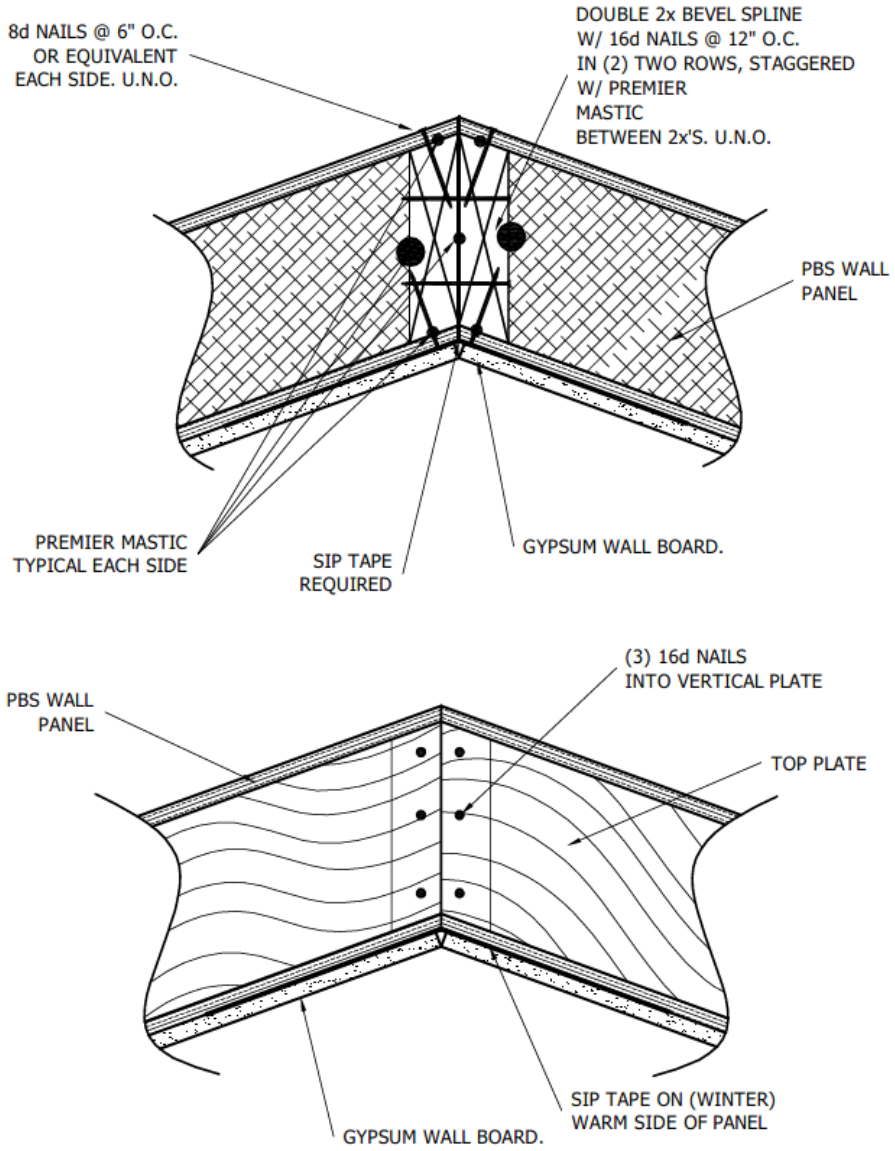
PBS-010 CAP PLATE 8-16-07
PREMIER SIPS

General Details: Wall Panel Corner Connection PBS-011



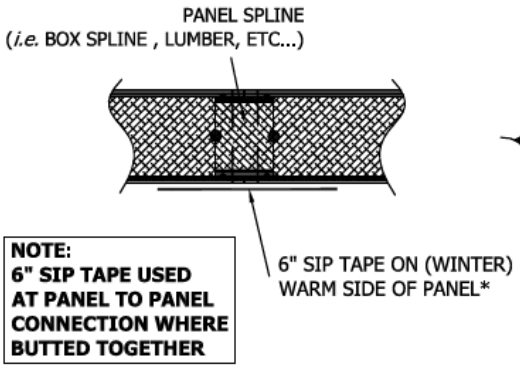
PBS-011 WALL PANEL CORNER CONNECTION 8-16-07
PREMIER SIPS

General Details: Wall Panel Angled Corner PBS-012



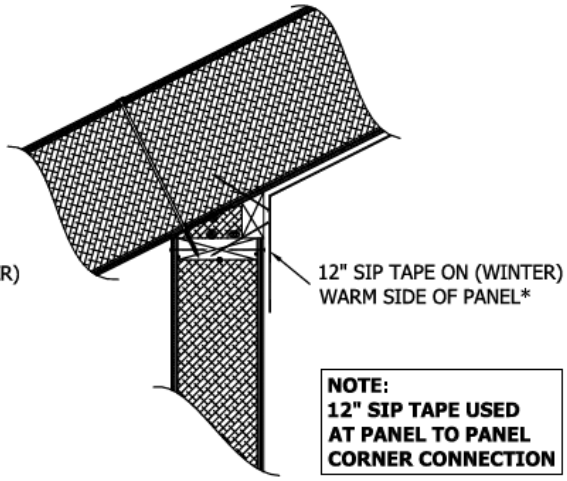
PBS-012 WALL PANEL ANGLED CORNER 8-16-07
PREMIER SIPS

General Details: SIP Tape Application PBS-013



NOTE:
6" SIP TAPE USED AT PANEL TO PANEL CONNECTION WHERE BUTTED TOGETHER

IN PLANE PANEL JOINT
(INSTALL LAST)



NOTE:
12" SIP TAPE USED AT PANEL TO PANEL CORNER CONNECTION

PANEL TO PANEL CORNER
(INSTALL SECOND)

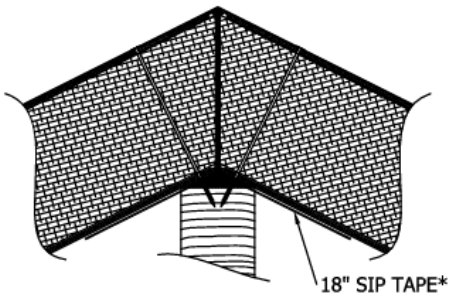
NOTES:

SURFACE PREPARATION
ALL SURFACES MUST BE CLEAN, DRY AND FREE OF DIRT, OIL, AND ANY OTHER CONTAMINANTS. DO NOT APPLY SIP TAPE ON THE UNDERSIDE OF ROOF PANELS PRIOR TO THE INSTALLATION OF THE ROOFING UNDERLAYMENT AND FINAL ROOF COVERING. SURFACE TEMPERATURE OF THE MATERIAL PBS SIP TAPE IS BEING APPLIED TO SHOULD BE 20° F OR WARMER.

TAPE INSTALLATION
CENTER TAPE OVER JOINT, REMOVE BACKING AND PRESS FIRMLY INTO PLACE. PRESS FROM THE CENTER OUTWARD TO ENSURE A TIGHT SEAL. AFTER TAPE HAS BEEN INSTALLED REMOVE BUBBLES AND WRINKLES WITH A ROLLER OR SIMILAR TOOL.

JOINTS OVER BEAMS
ROLL OUT TAPE CENTERED OVER BEAM PRIOR TO PANEL INSTALLATION AND SECURE WITH STAPLES. AFTER PANELS ARE INSTALLED AND SECURED OVER TAPE, REMOVE BACKING AND PRESS FIRMLY INTO PLACE.

OVERLAPS AND "T" JOINTS
TAPE FOR PANEL TO PANEL CORNERS AND PANEL JOINTS OVER BEAMS SHOULD BE INSTALLED BEFORE IN PLANE PANEL JOINTS. OVERLAP TAPE A MINIMUM OF 3" AT "T" JOINTS AND WHEN CONTINUING A SEAM TO INSURE AN AIRTIGHT SEAL.



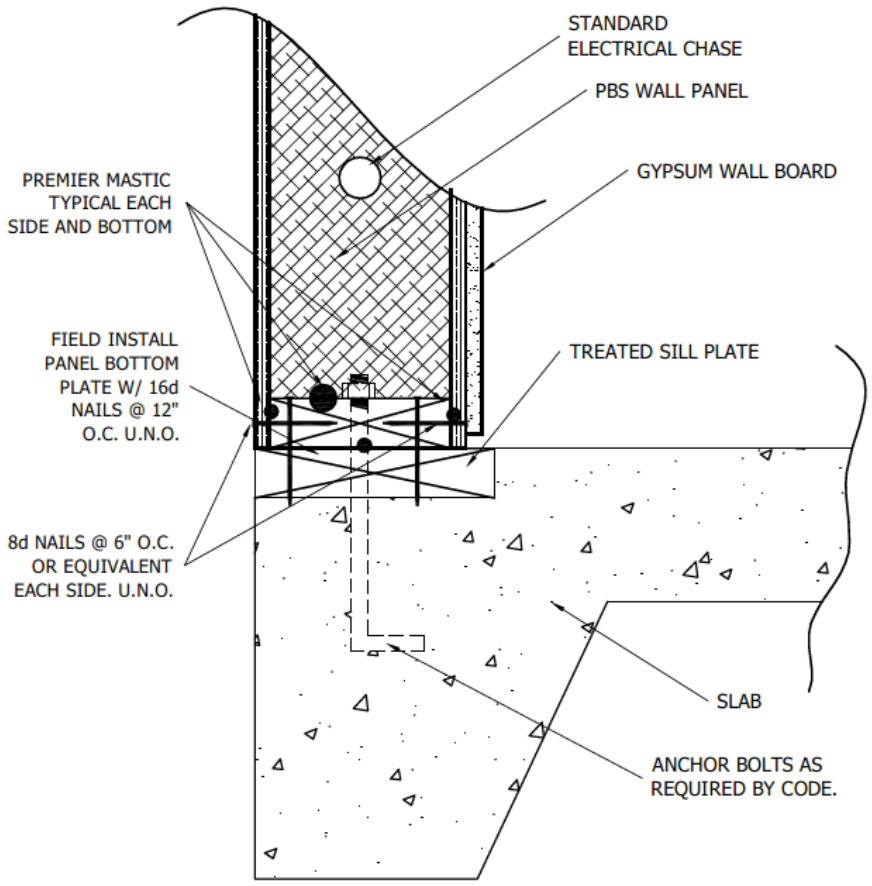
NOTE:
18" SIP TAPE USED AT PANEL TO PANEL CONNECTION OVER BEAMS

PANEL JOINT OVER BEAM
(INSTALL FIRST)

*REFER TO PBS TECHNICAL BULLETINS #28 & #32 FOR SIP TAPE APPLICAITON.

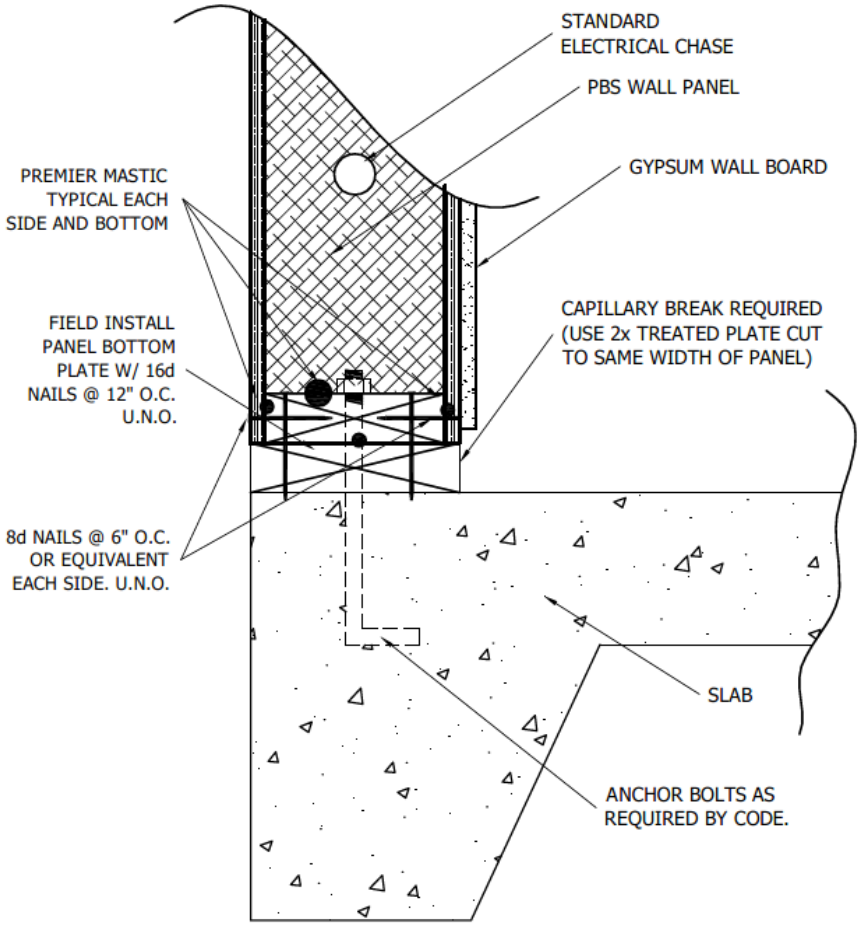
PBS-013 **SIP TAPE APPLICATION** 11-9-10
PREMIER SIPS

Floor/Foundation Details: Recessed Sill Plate PBS-101



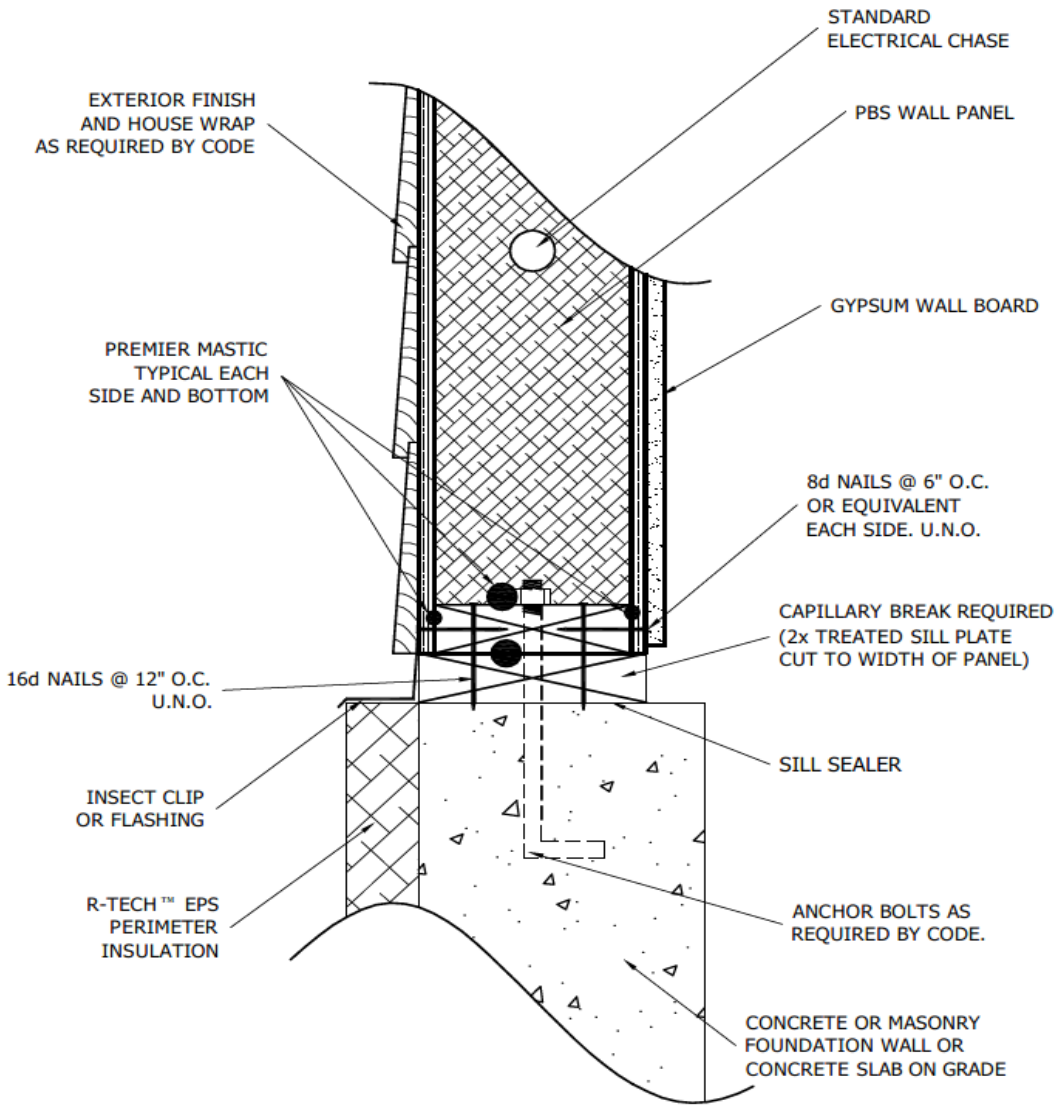
PBS-101 RECESSED SILL PLATE 8-16-07
PREMIER SIPS

Floor/Foundation Details: Capillary Break on Slab PBS-102



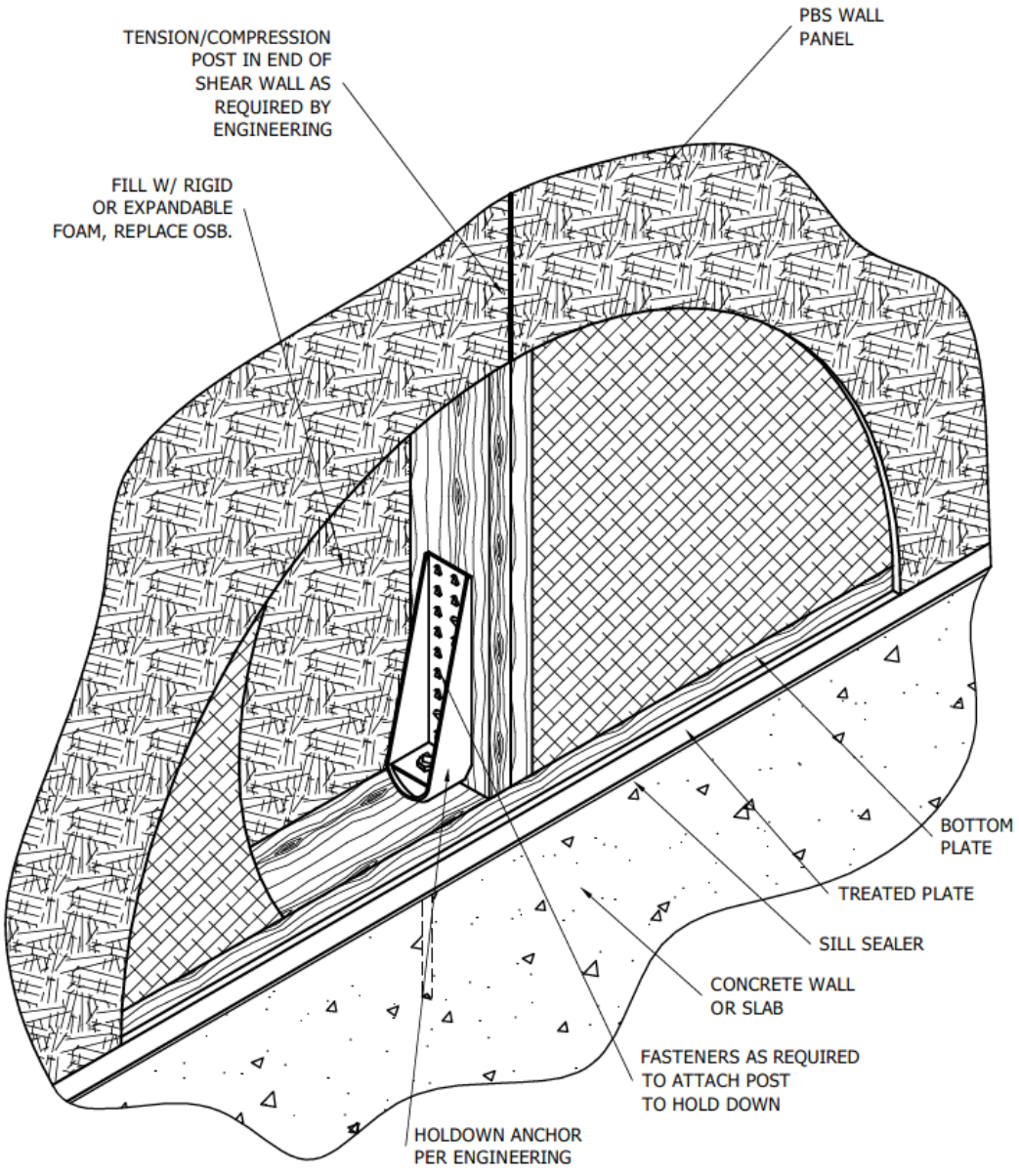
PBS-102 CAPILLARY BREAK ON SLAB 8-16-07
PREMIER SIPS

Floor/Foundation Details: Panel/Foundation Connection PBS-103



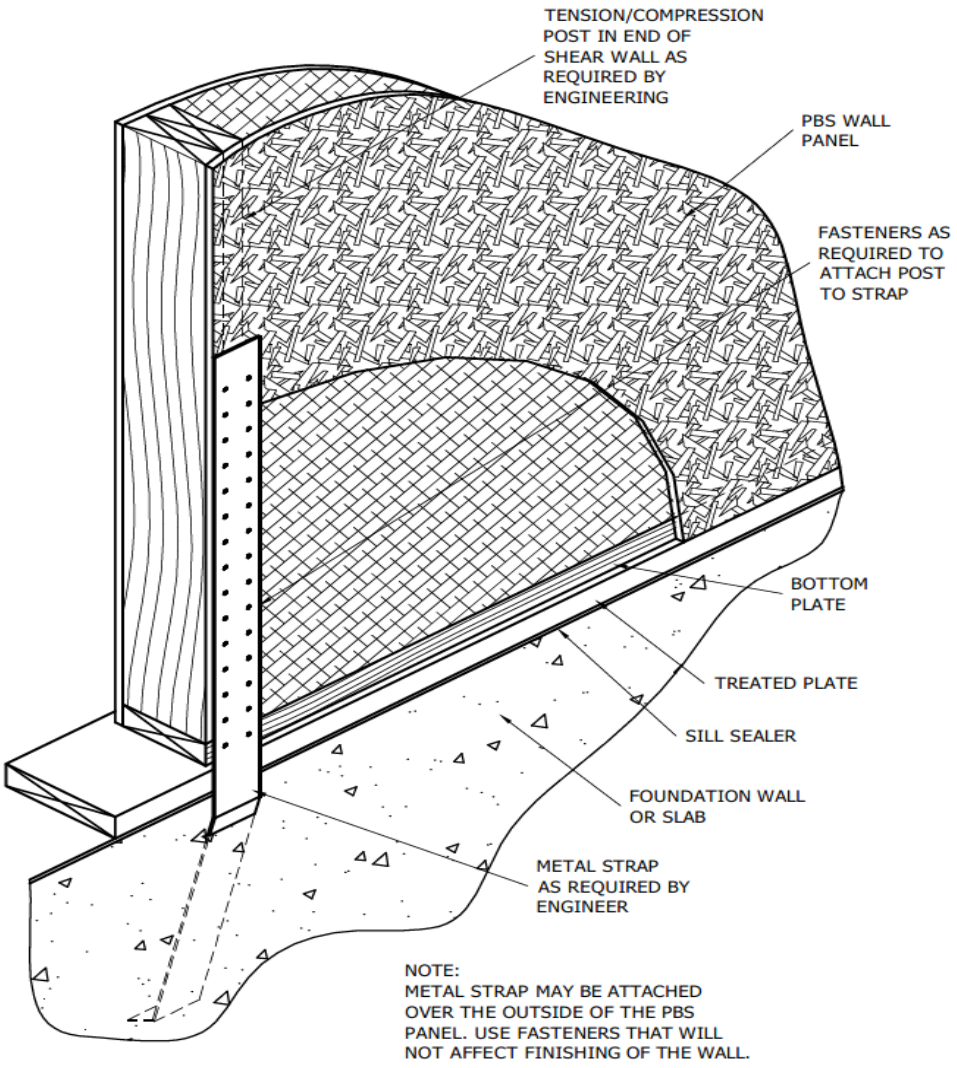
PBS-103 PANEL / FOUNDATION CONNECTION 8-16-07
PREMIER SIPS

Floor/Foundation Details: Hold Down Connection PBS-104



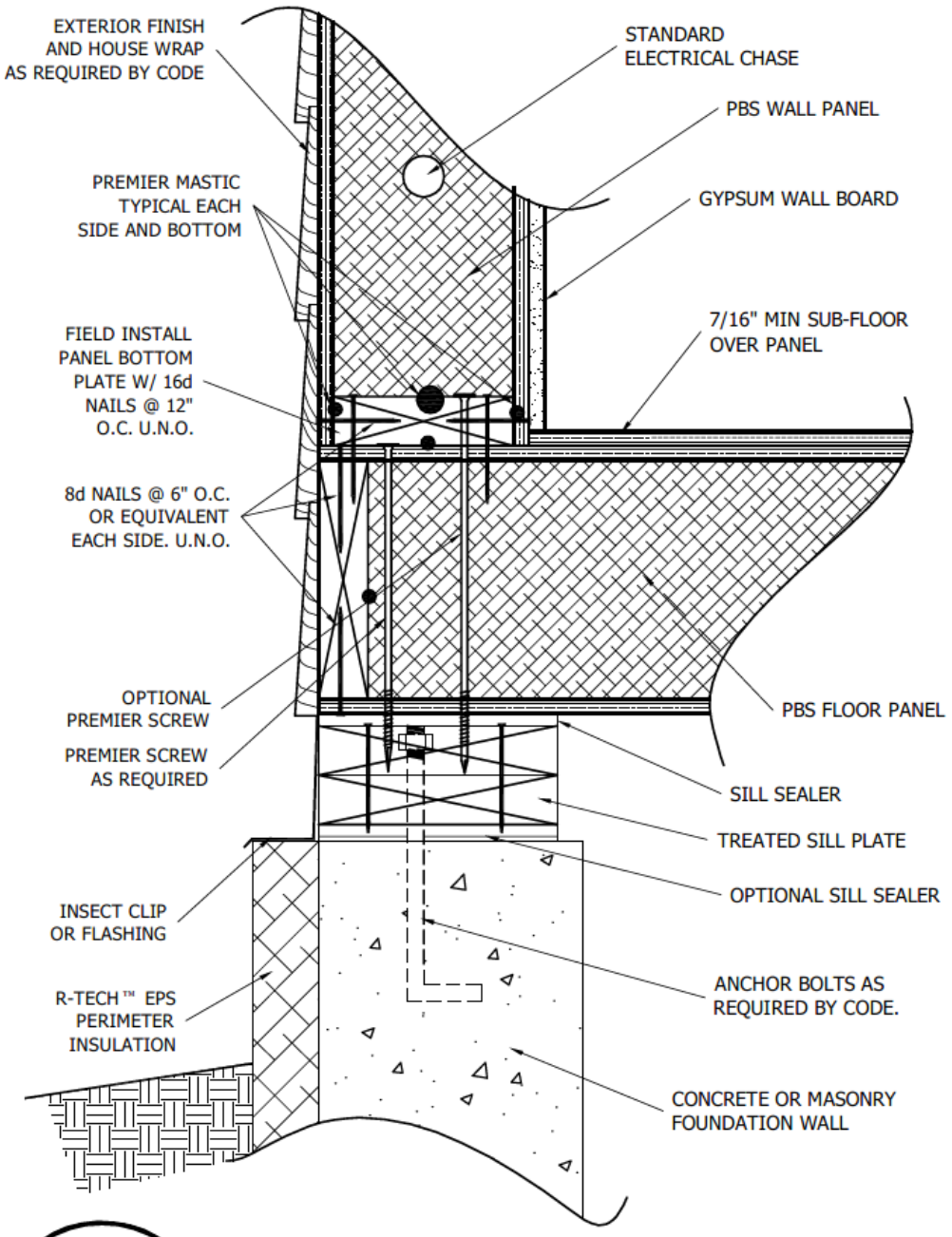
PBS-104 HOLD DOWN CONNECTION 8-16-07
PREMIER SIPS

Floor/Foundation Details: Strap Hold Down Connection PBS-105

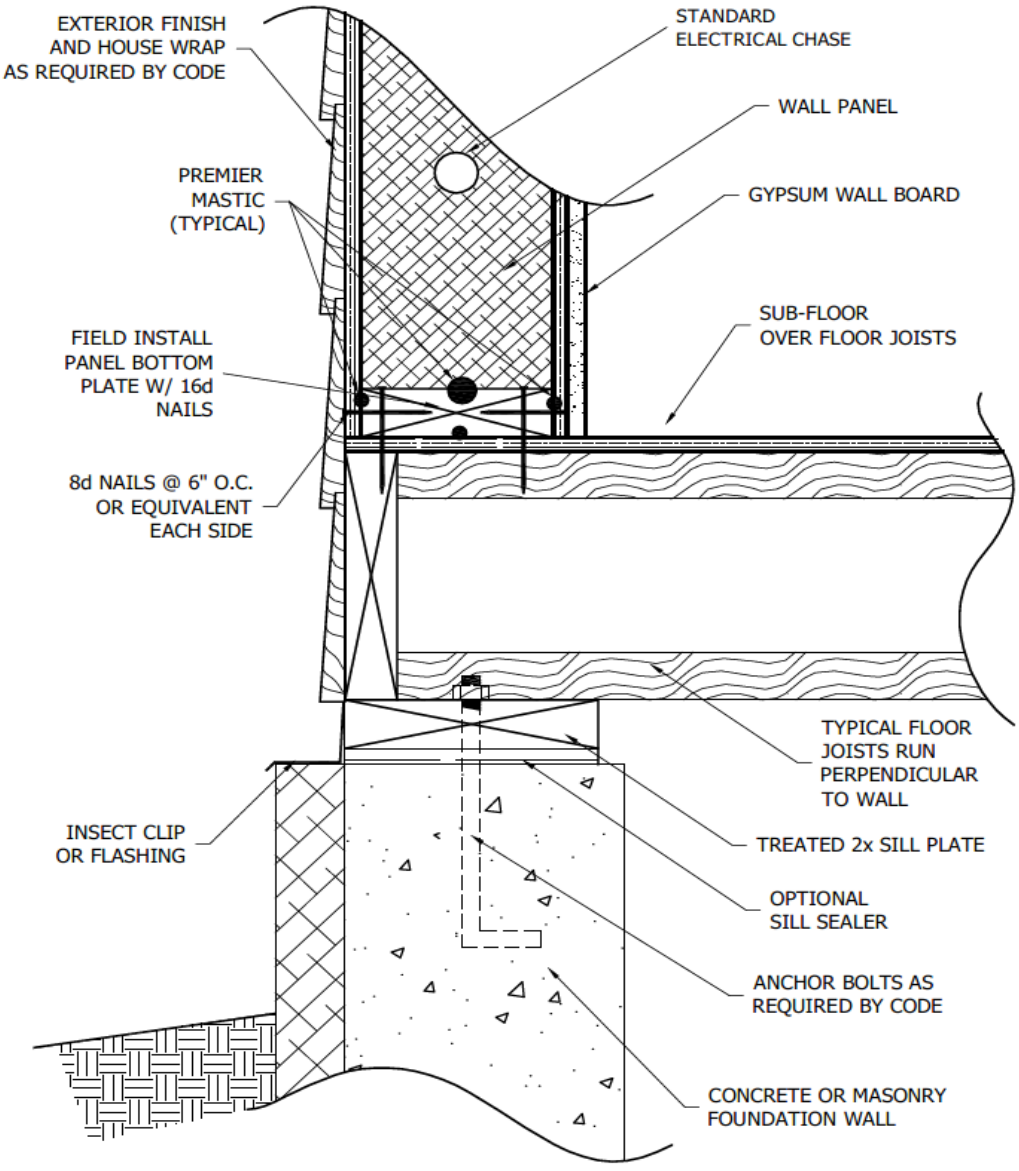


PBS-105 STRAP HOLDDOWN CONNECTION 8-16-07
PREMIER SIPS

Floor/Foundation Details: Foundation Framing 1 PBS-106

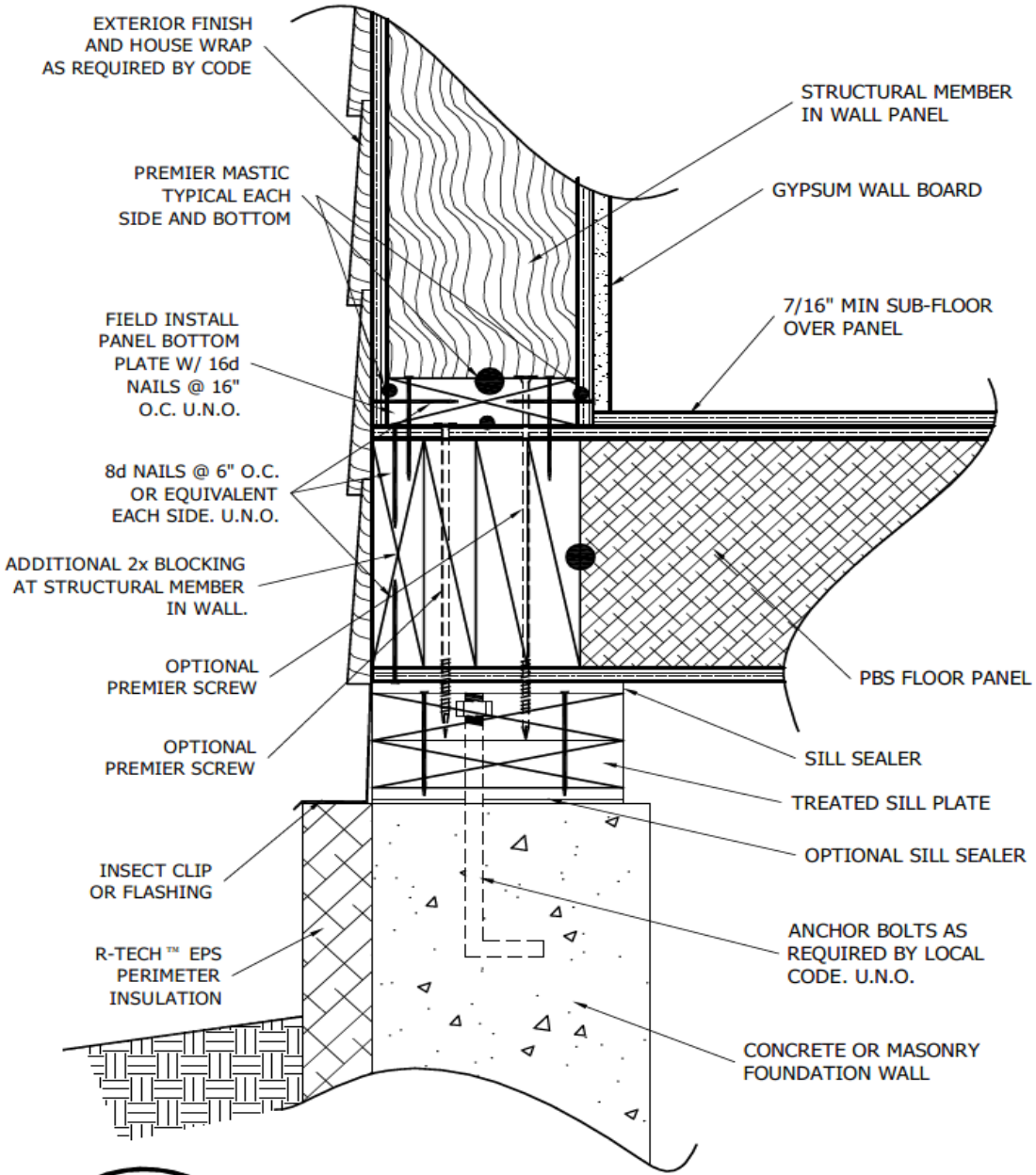


Floor/Foundation Details: Foundation Framing 2 PBS-107

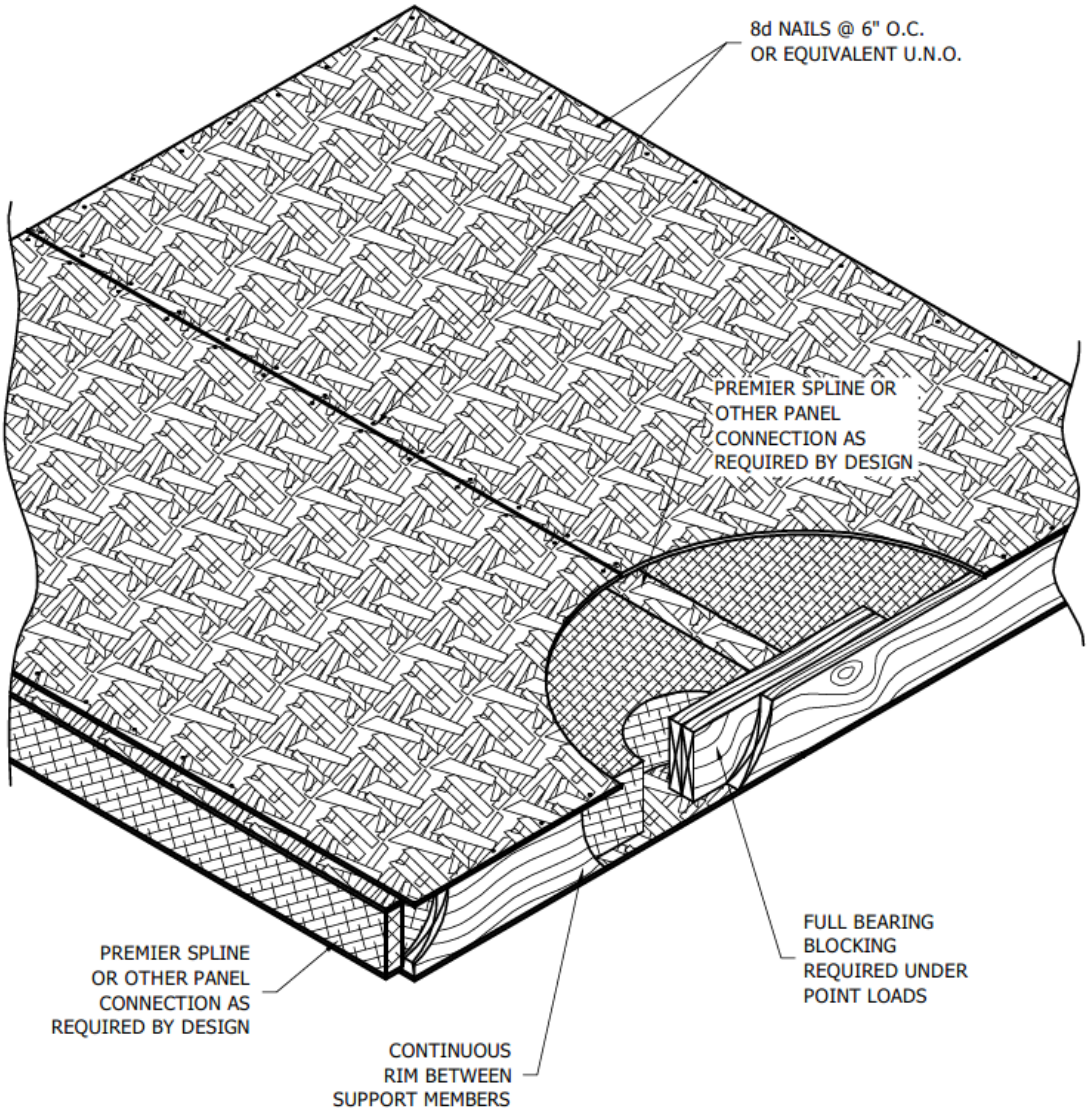


PBS-107 FOUNDATION FRAMING 8-16-07
PREMIER SIPS

Floor/Foundation Details: Panel Floor Blocking PBS-108



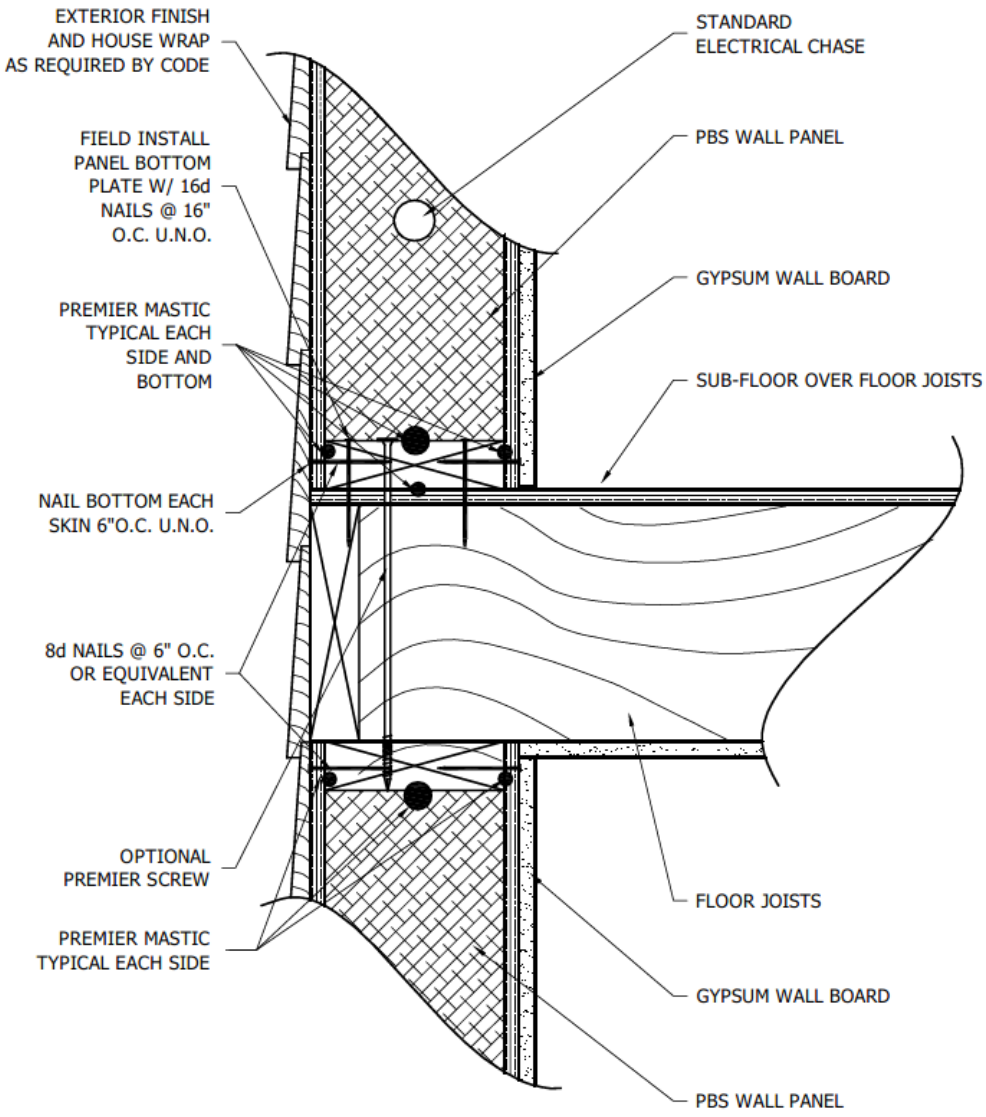
PBS-108 PANEL FLOOR BLOCKING 8-16-07
PREMIER SIPS



PBS-109 FLOOR BLOCKING 8-16-07

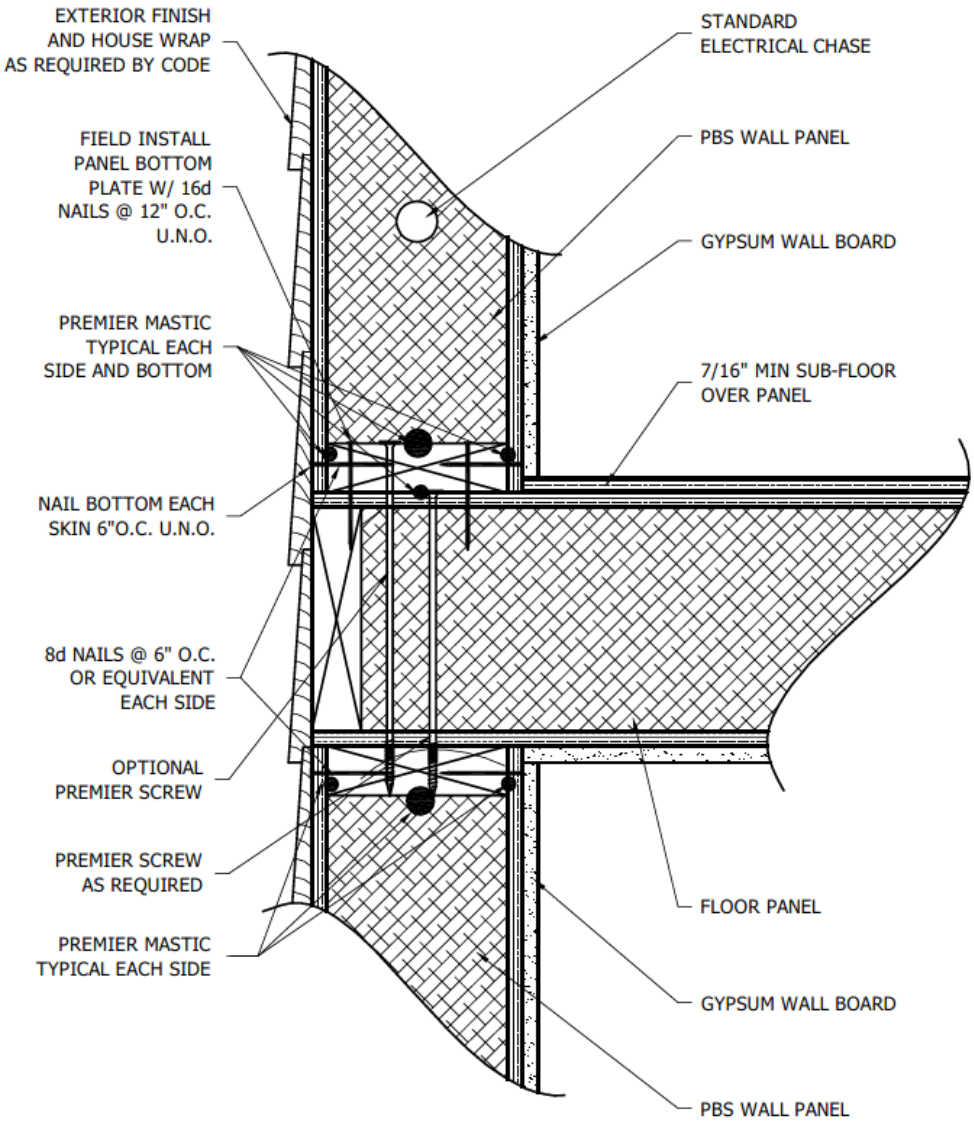
PREMIER SIPS

Floor/Foundation Details: Platform Framing 1 PBS-110



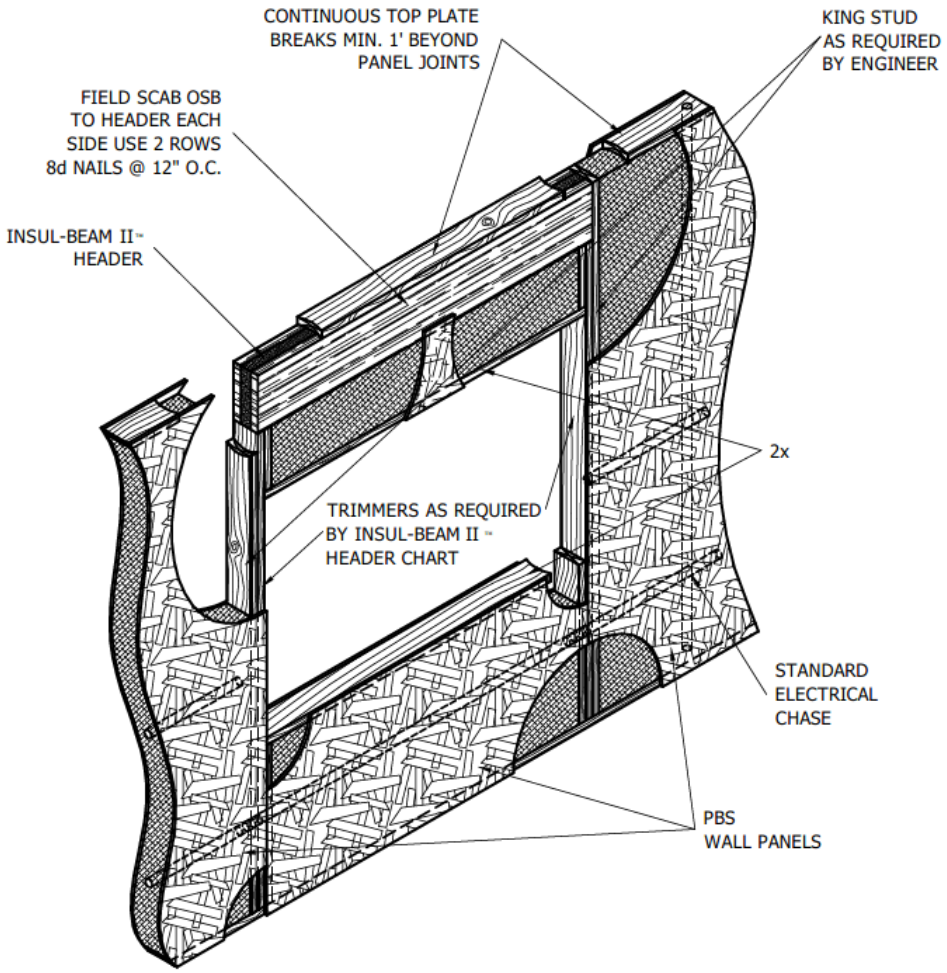
PBS-110 PLATFORM FRAMING 8-16-07
PREMIER SIPS

Floor/Foundation Details: Platform Framing 2 PBS-111



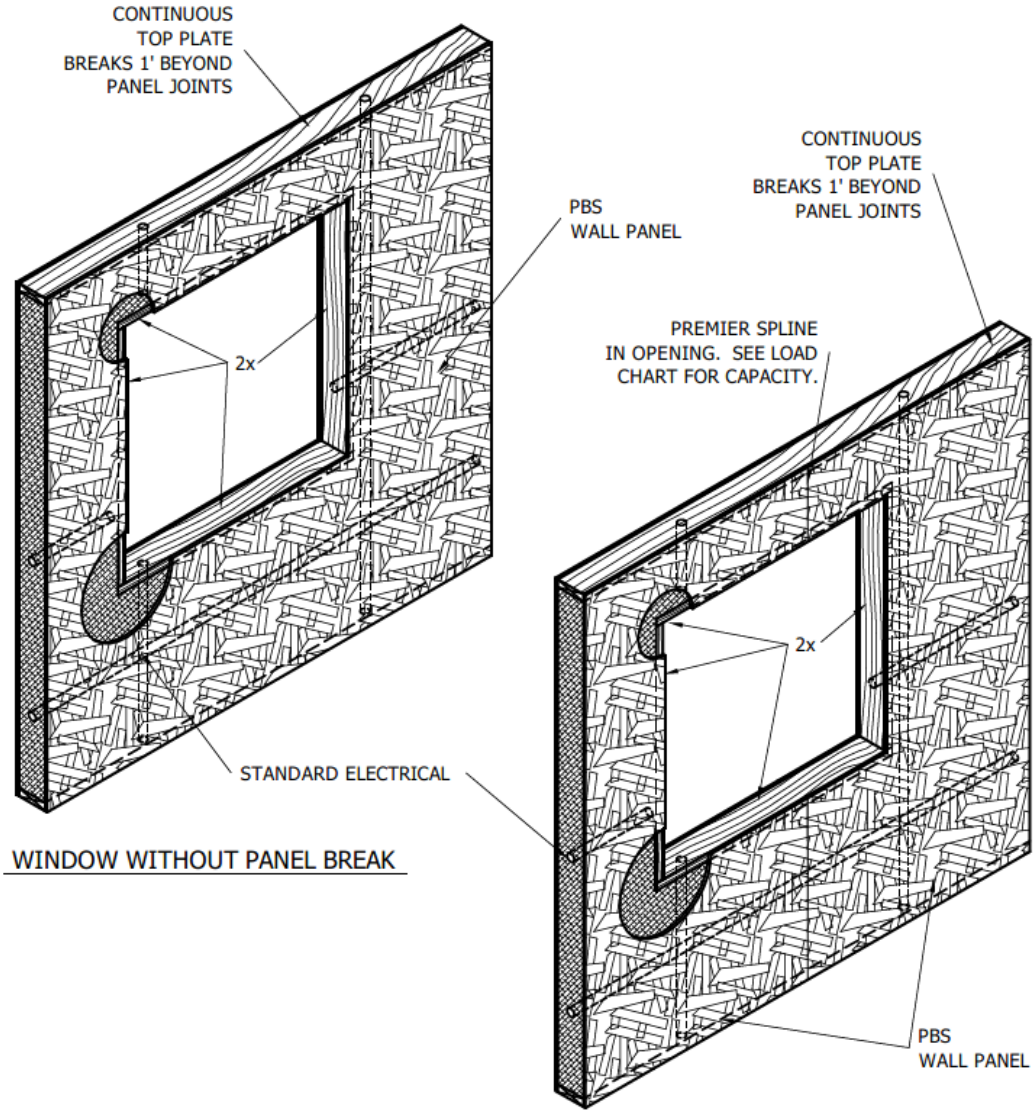
PBS-111 PLATFORM FRAMING 8-16-07
PREMIER SIPS

Wall Details: Insul-Beam Header PBS-201



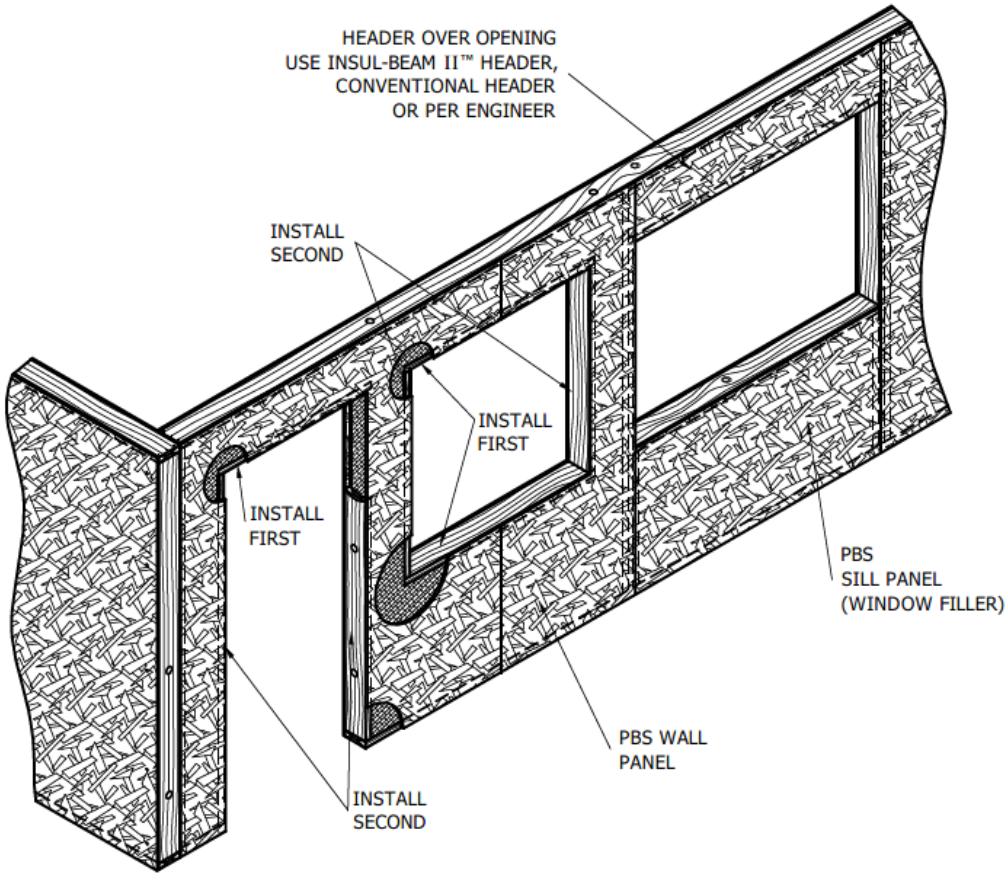
PBS-201 INSUL-BEAM HEADER 8-17-07
PREMIER SIPS

Wall Details: Panel as Header PBS-202



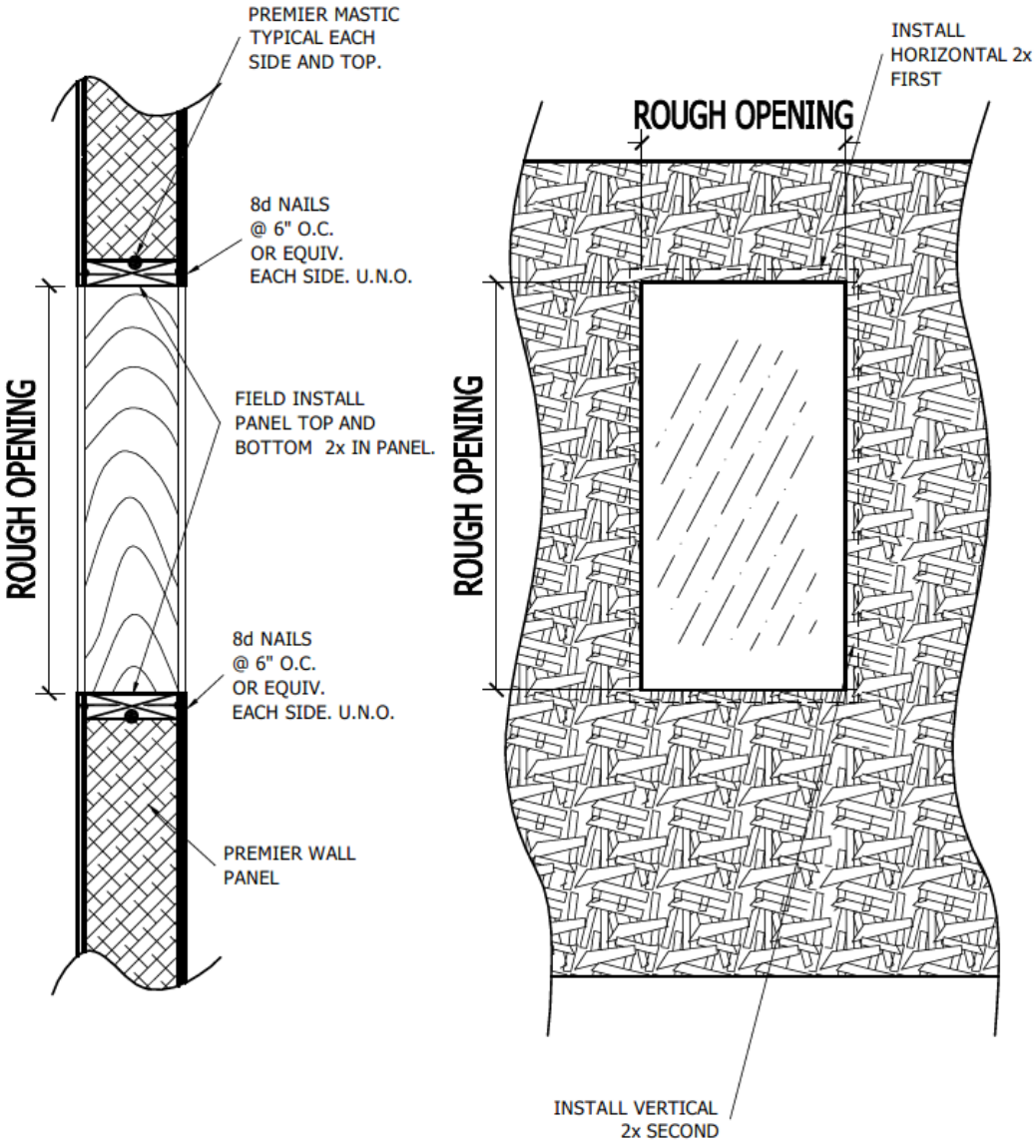
PBS-202 PANEL AS HEADER 8-17-07
PREMIER SIPS

Wall Details: Typical Panel Wall PBS-203



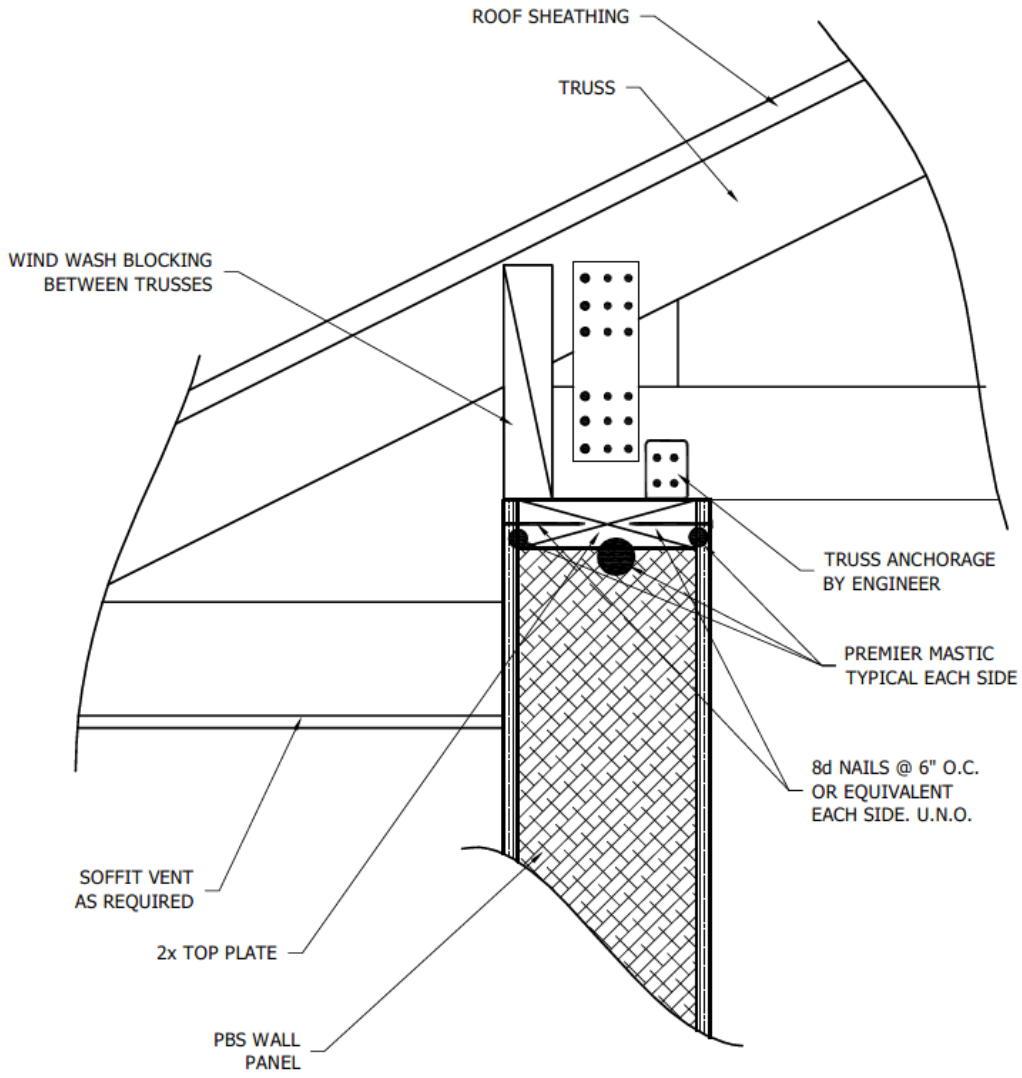
PBS-203 TYPICAL PANEL WALL 8-17-07
PREMIER SIPS

Wall Details: Typical Opening Framing PBS-204



PBS-204 TYPICAL OPENING FRAMING 8-17-07
PREMIER SIPS

Wall Details: Truss Bearing PBS-205

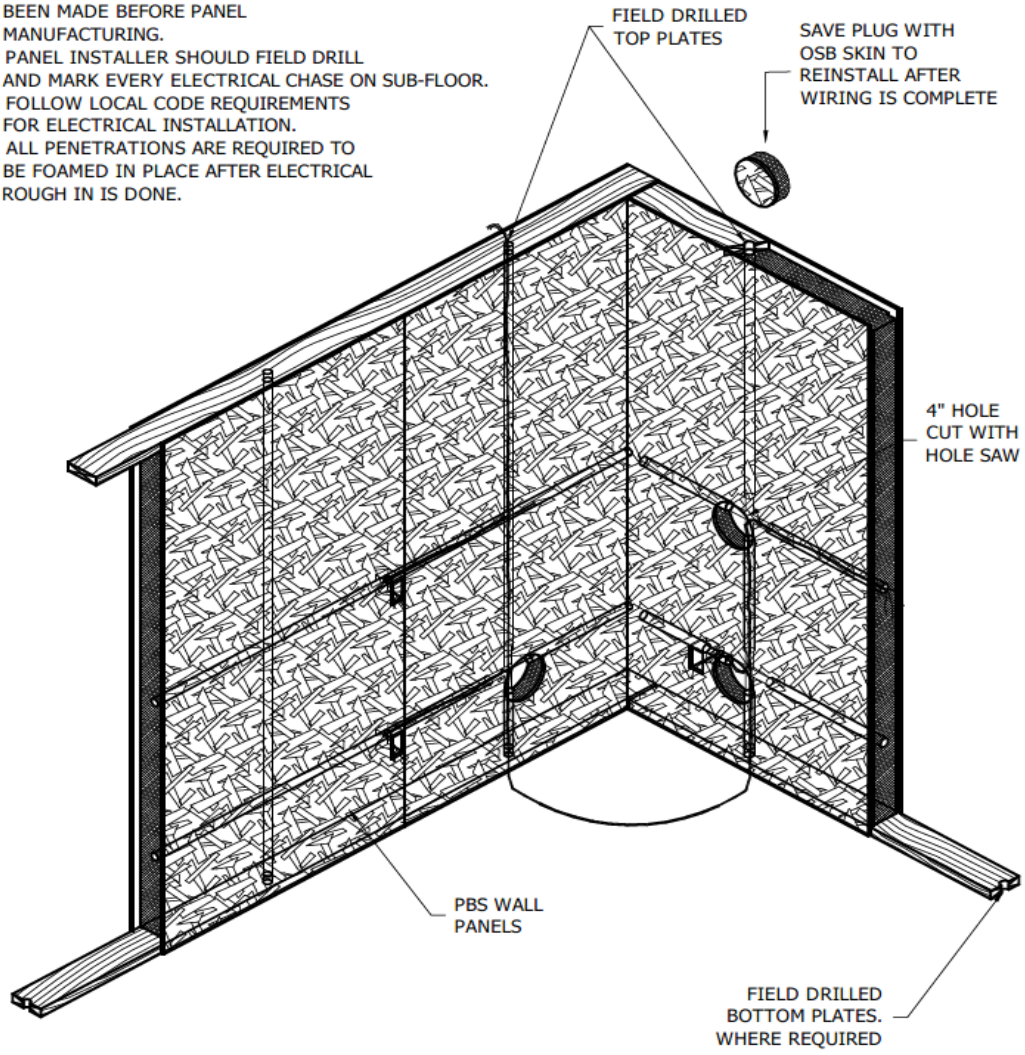


PBS-205 TRUSS BEARING 8-17-07
PREMIER SIPS

Wall Details: Standard Electrical Chases PBS-206

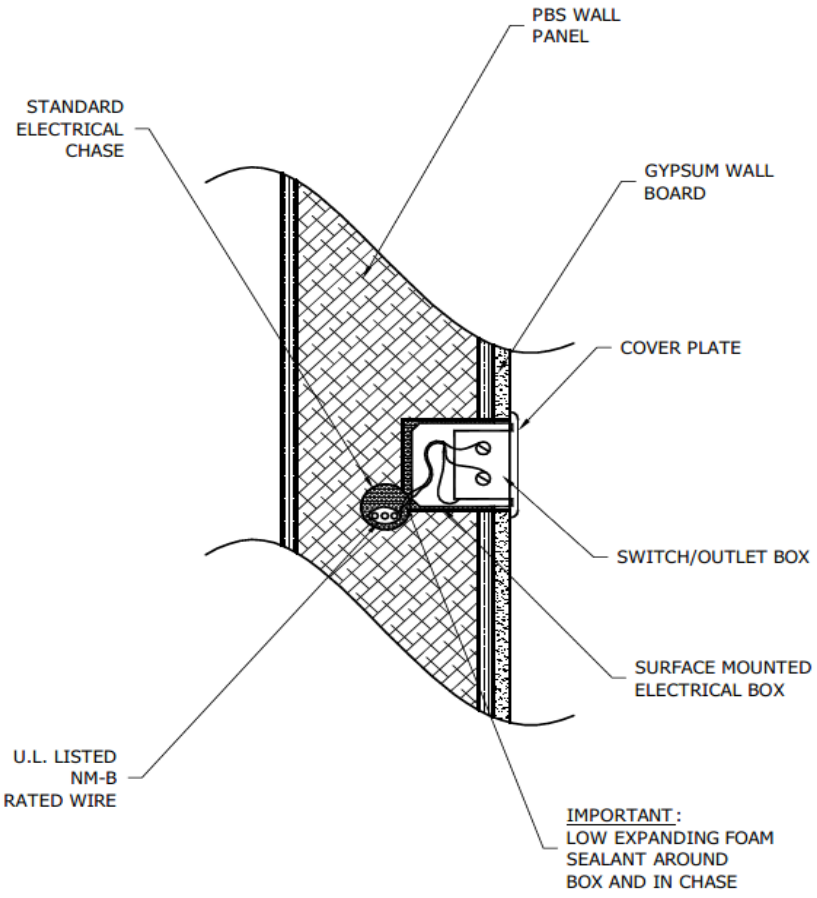
NOTES:

1. FACTORY PROVIDED HORIZONTAL ELECTRICAL CHASES ARE STANDARD 16" AND 45" ABOVE BOTTOM OF PANEL AND ROUGHLY 48" O.C. VERTICALLY UNLESS PRIOR ARRANGEMENTS HAVE BEEN MADE BEFORE PANEL MANUFACTURING.
2. PANEL INSTALLER SHOULD FIELD DRILL AND MARK EVERY ELECTRICAL CHASE ON SUB-FLOOR.
3. FOLLOW LOCAL CODE REQUIREMENTS FOR ELECTRICAL INSTALLATION.
4. ALL PENETRATIONS ARE REQUIRED TO BE FOAMED IN PLACE AFTER ELECTRICAL ROUGH IN IS DONE.



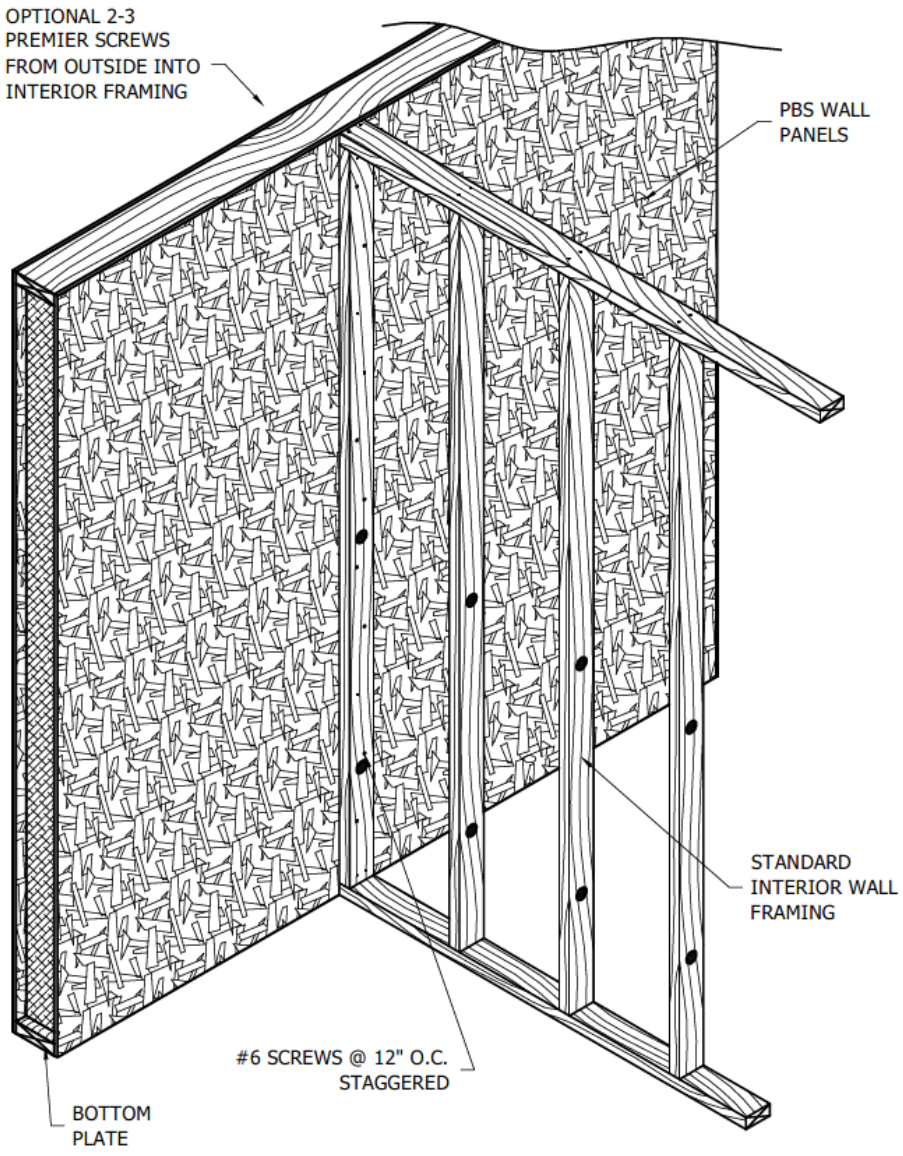
PBS-206 STANDARD ELECTRICAL CHASES 8-17-07
PREMIER SIPS

Wall Details: Electrical Box Installation PBS-207



PBS-207 ELECTRICAL BOX INSTALLATION 8-17-07
PREMIER SIPS

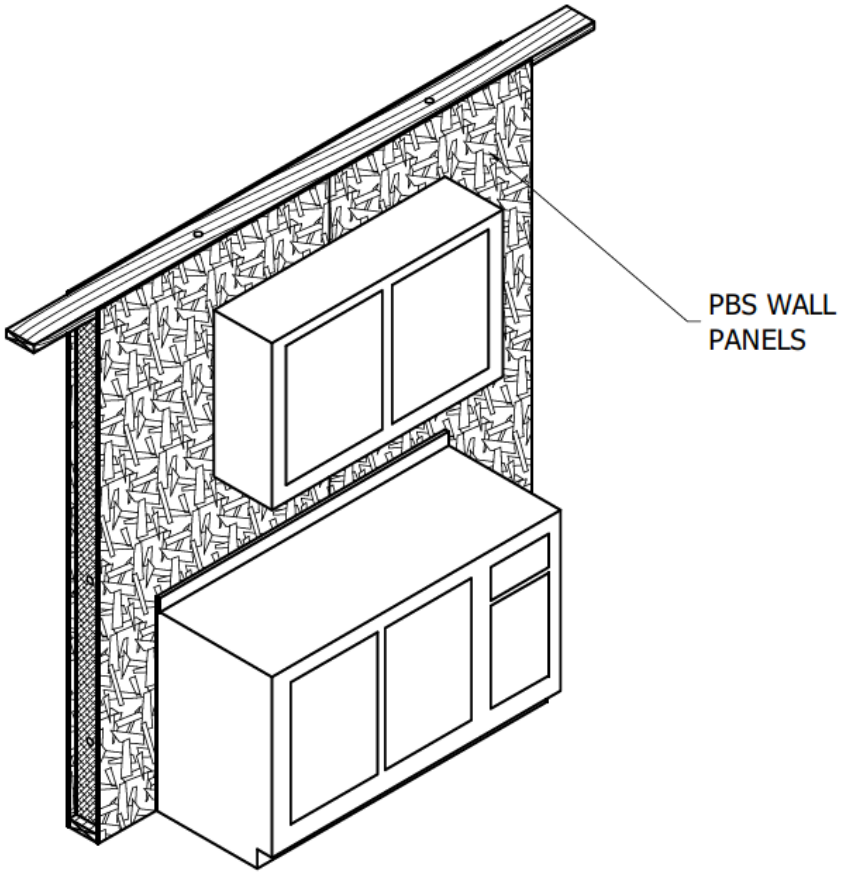
Wall Details: Interior Wall Connection PBS-208



PBS-208 INTERIOR WALL CONNECTION 8-17-07
PREMIER SIPS

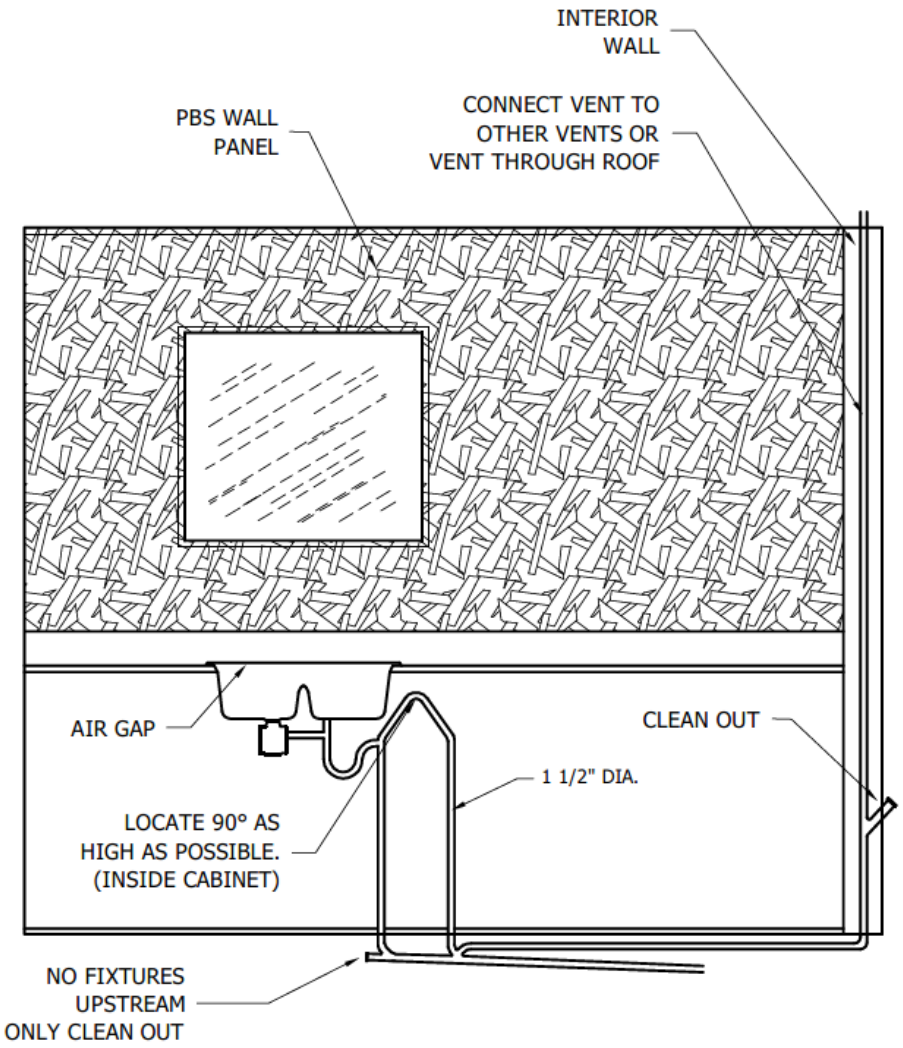
Wall Details: Typical Cabinet Connection PBS-209

FOR TYPICAL CABINET LOADINGS.
FASTEN CABINET TO PANELS FOLLOWING CABINET MANUFACTURER'S RECOMMENDATIONS.
FOR EXTREME CABINET LOADS CONSULT PREMIER BUILDING SYSTEMS BEFORE INSTALLATION.



PBS-209 TYPICAL CABINET CONNECTION 8-17-07
PREMIER SIPS

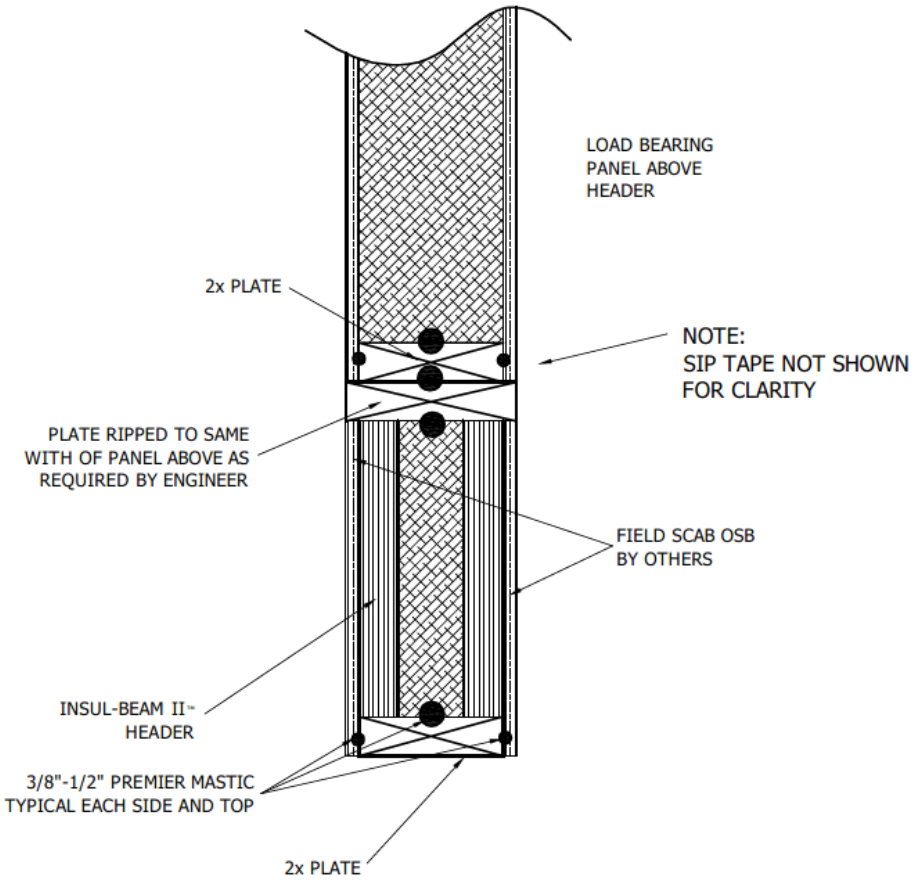
Wall Details: Island Vent Detail PBS-210



CONSULT LOCAL BUILDING CODES FOR ACCEPTANCE.

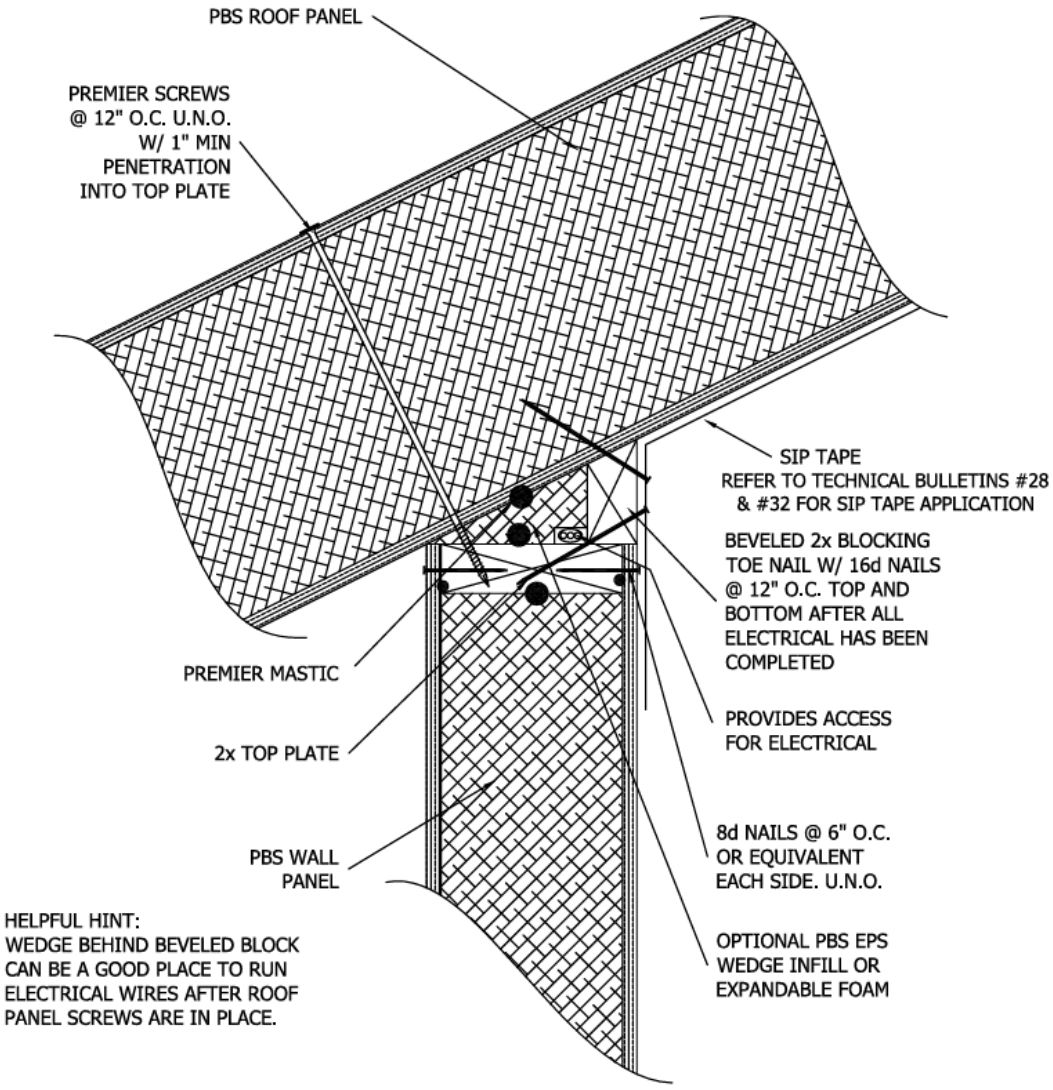
PBS-210 ISLAND VENT DETAIL 8-17-07
PREMIER SIPS

Wall Details: Insul-Beam Above Opening PBS-211



PBS-211 INSUL-BEAM HEADER ABOVE OPENING 11-9-07
PREMIER SIPS

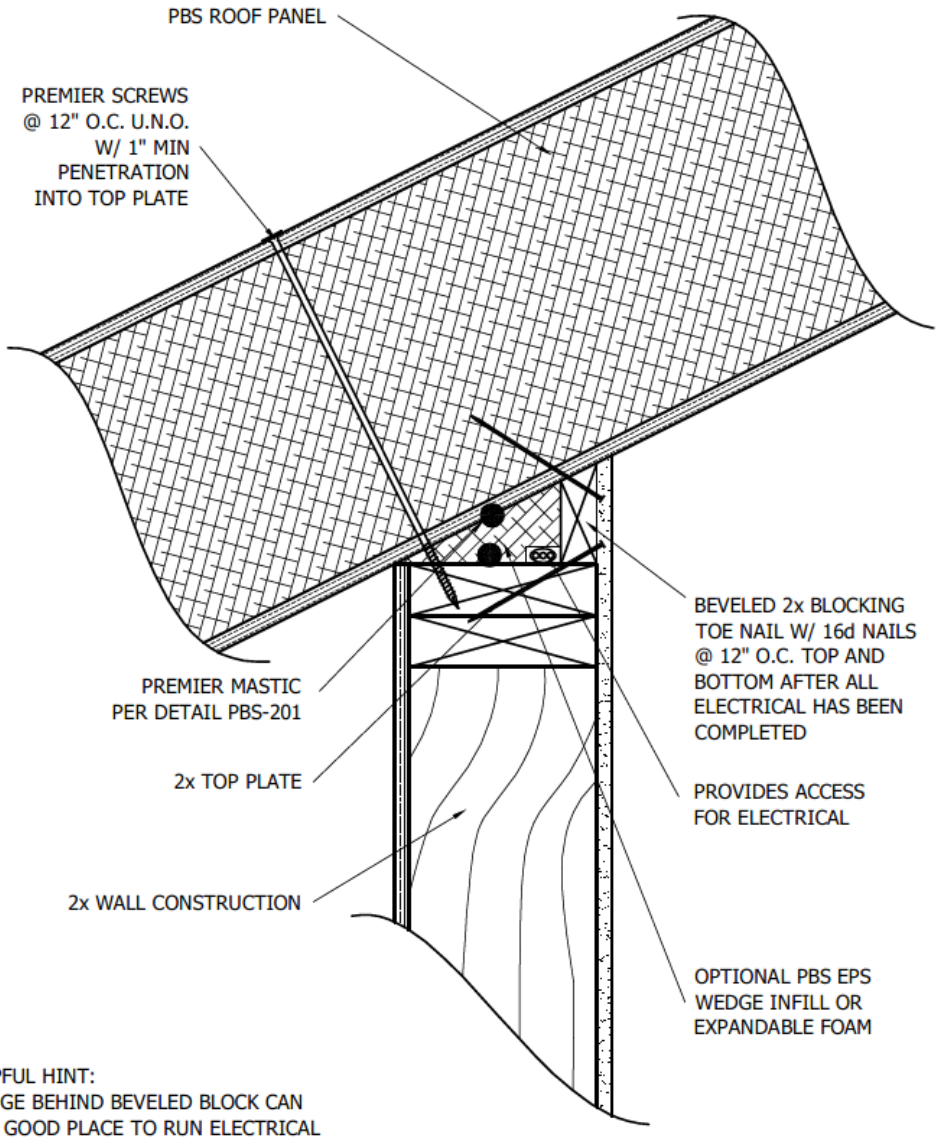
Roof Details: Beveled Block Wall/Roof 1 PBS-301



PBS-301 BEVELED BLOCK PANEL WALL/ROOF 11-9-10

PREMIER SIPS

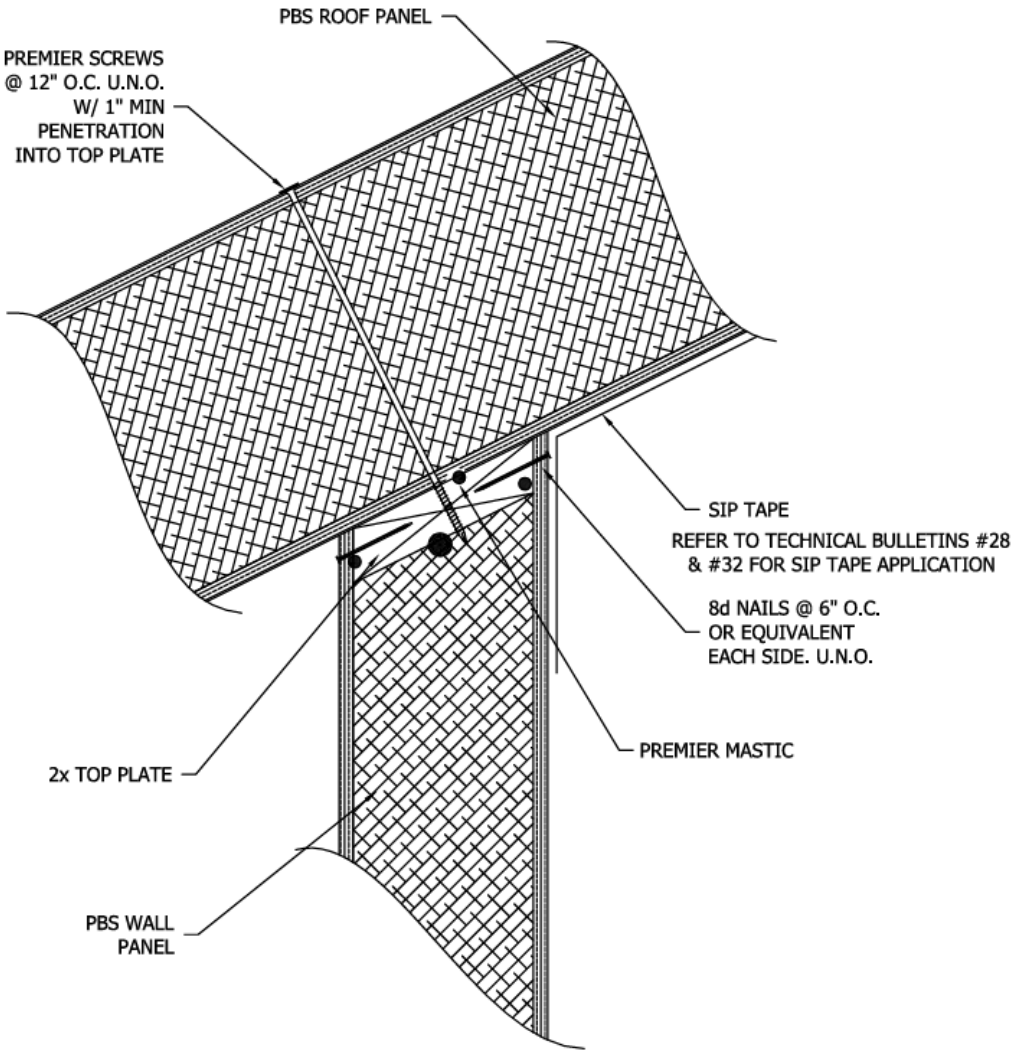
Roof Details: Beveled Block Wall/Roof 2 PBS-302



HELPFUL HINT:
WEDGE BEHIND BEVELED BLOCK CAN BE A GOOD PLACE TO RUN ELECTRICAL WIRES AFTER SCREWS ARE IN PLACE.

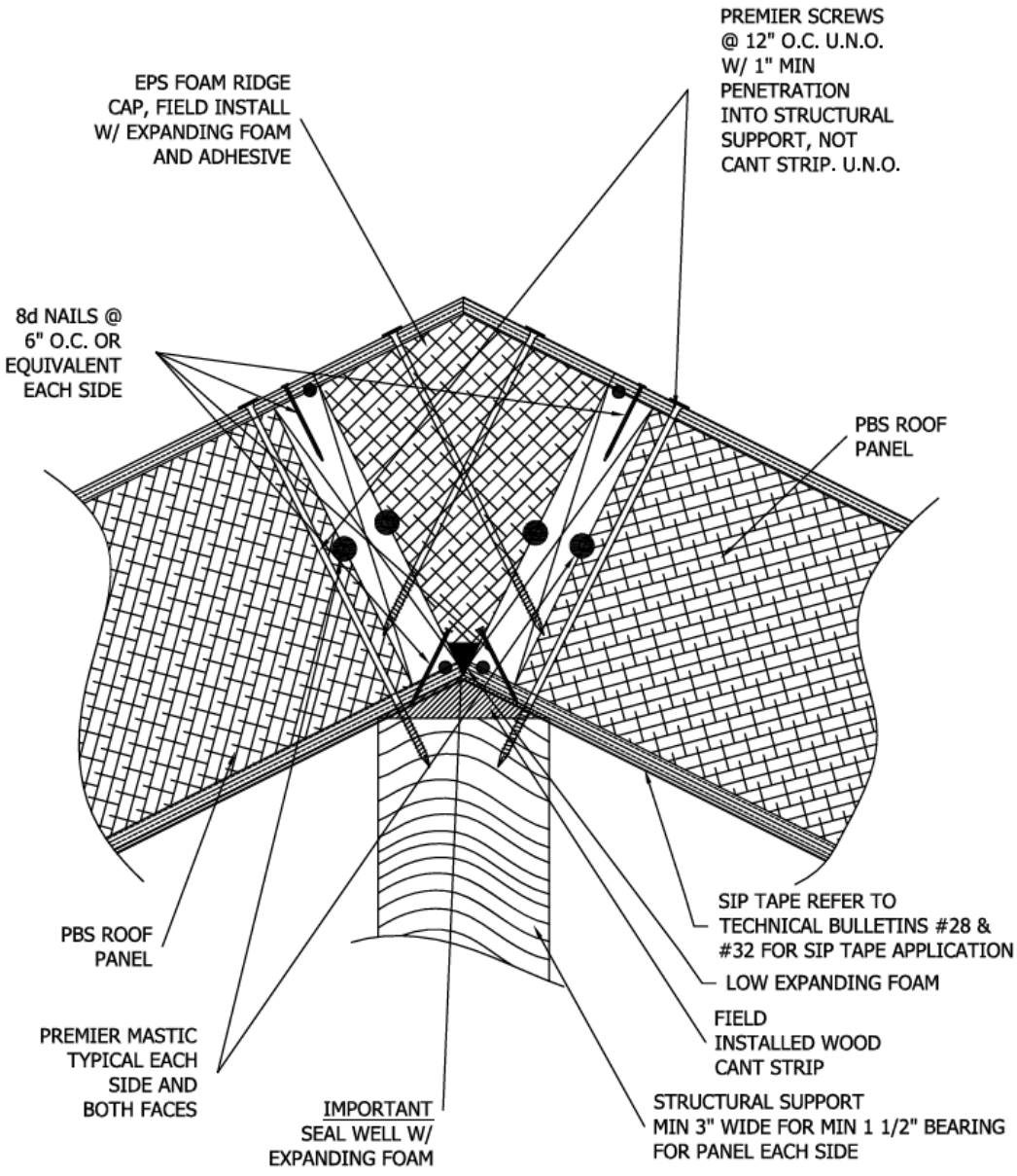
PBS-302 BEVELED BLOCK 2x WALL/ROOF 8-17-07
PREMIER SIPS

Roof Details: Beveled Wall/Roof Connection PBS-303



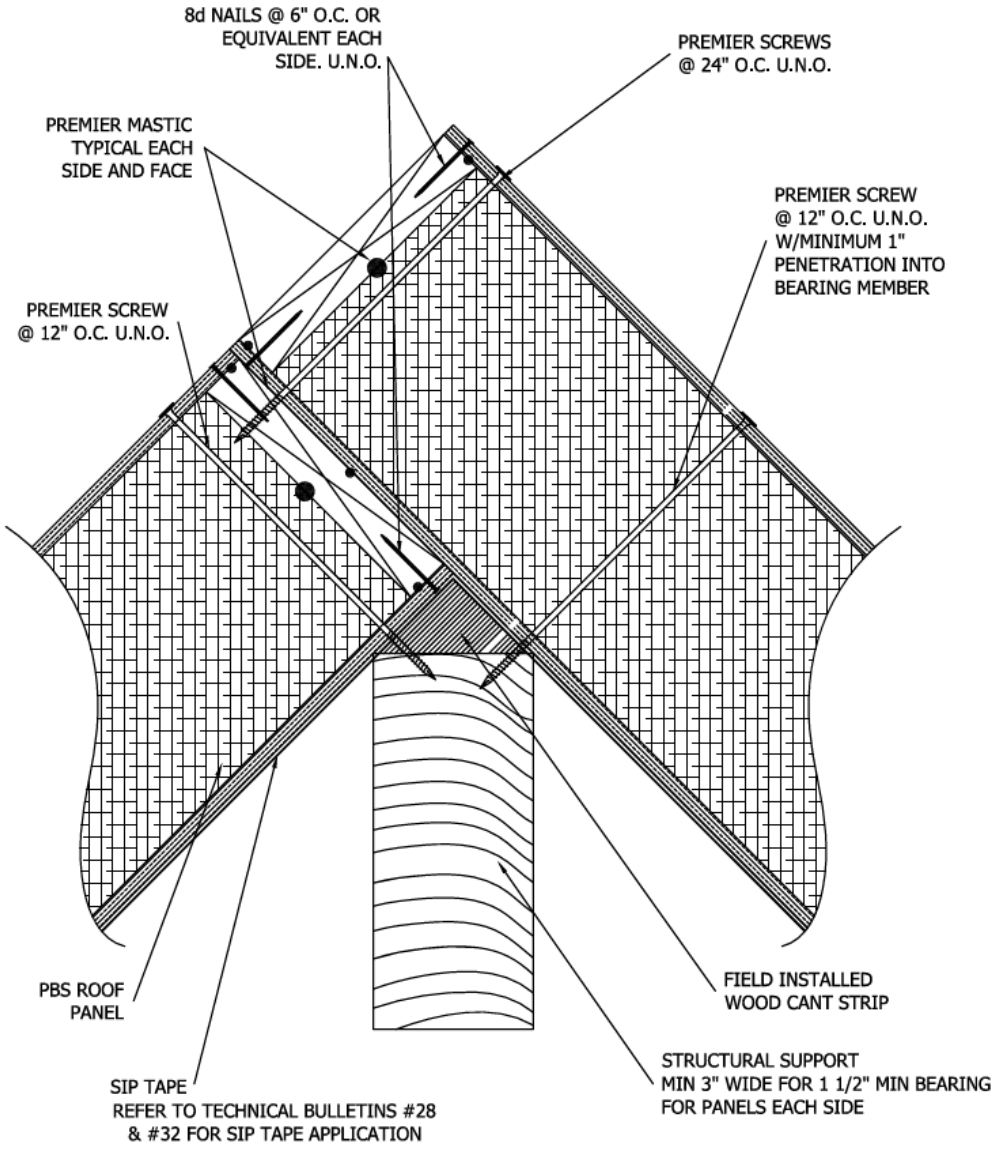
PBS-303 BEVELED PANEL WALL/ROOF CONNECTION 11-9-10
PREMIER SIPS

Roof Details: Ridge Cap Detail PBS-304



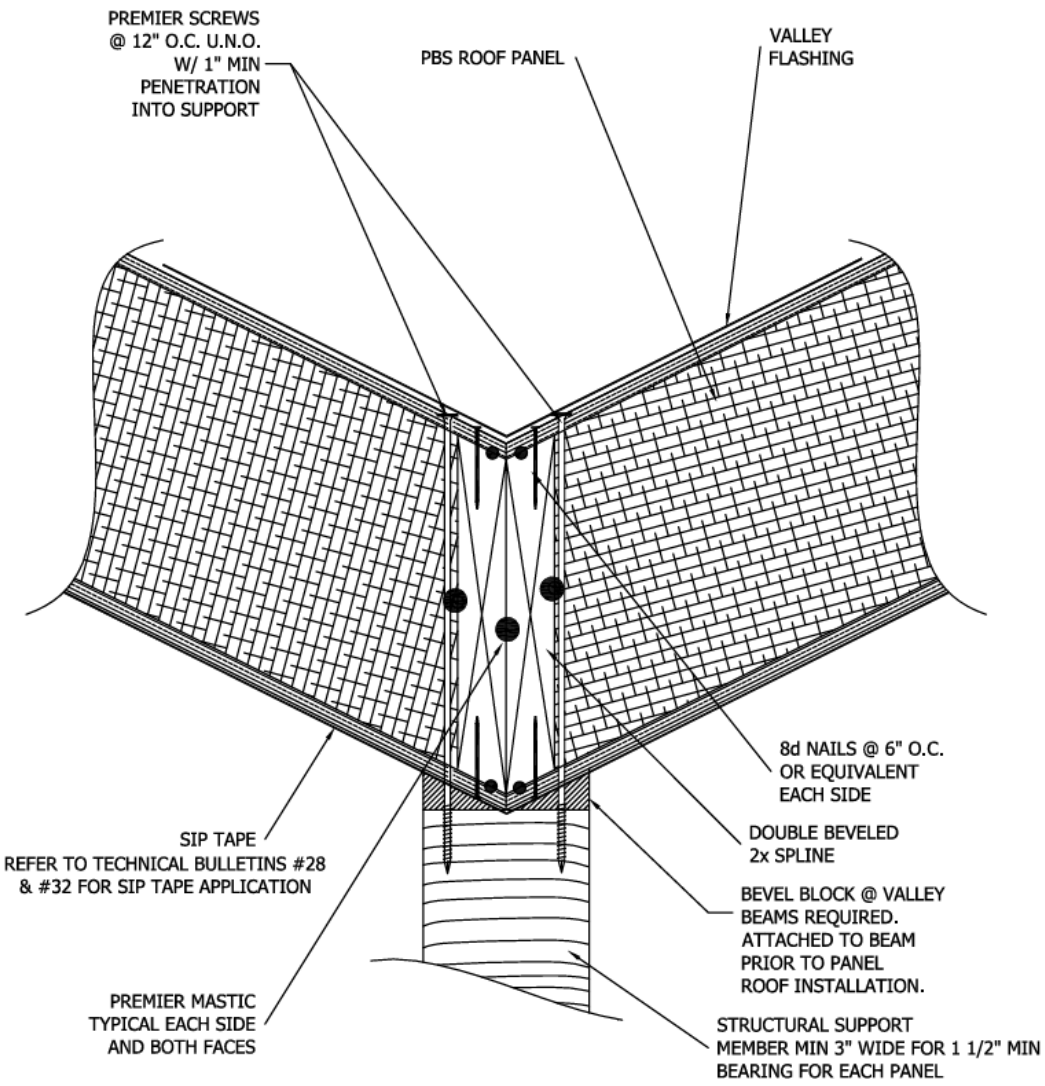
PBS-304 RIDGE CAP DETAIL 11-9-10
PREMIER SIPS

Roof Details: 12:12 Pitch Ridge Detail PBS-305



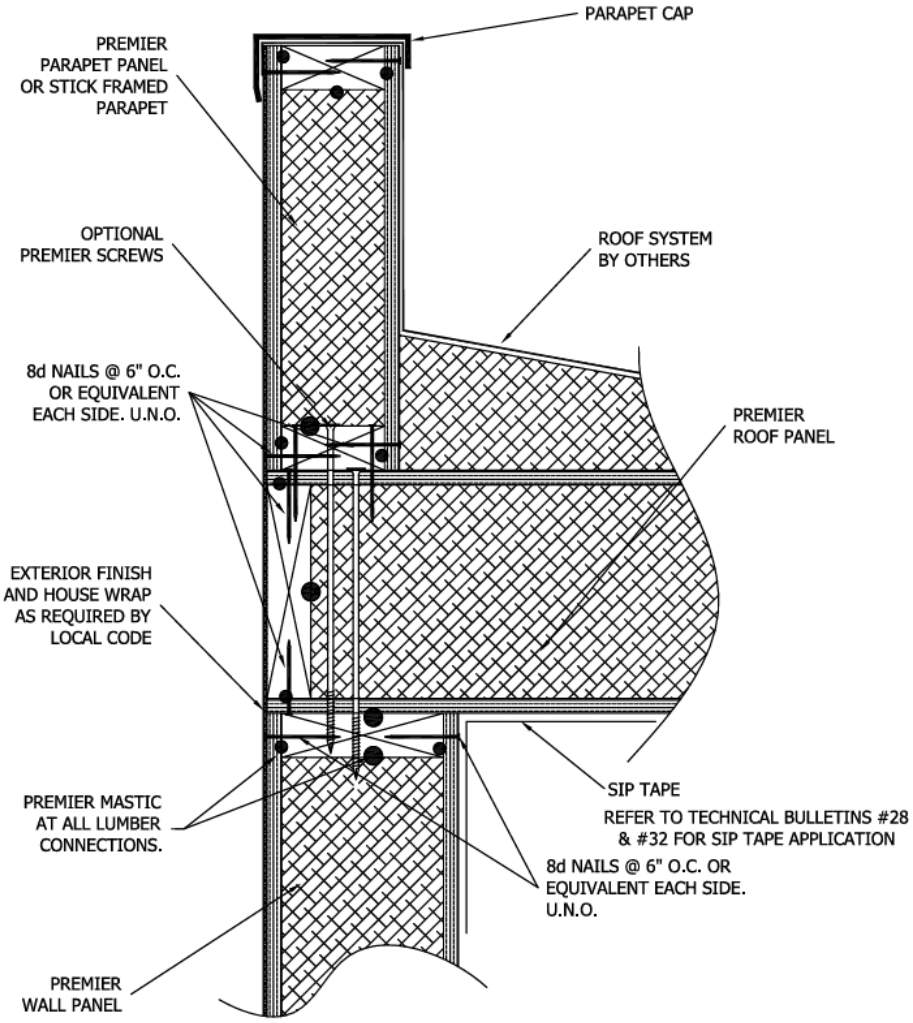
PBS-305 12:12 PITCH RIDGE DETAIL 11-9-10
PREMIER SIPS

Roof Details: Roof Valley Connection PBS-306



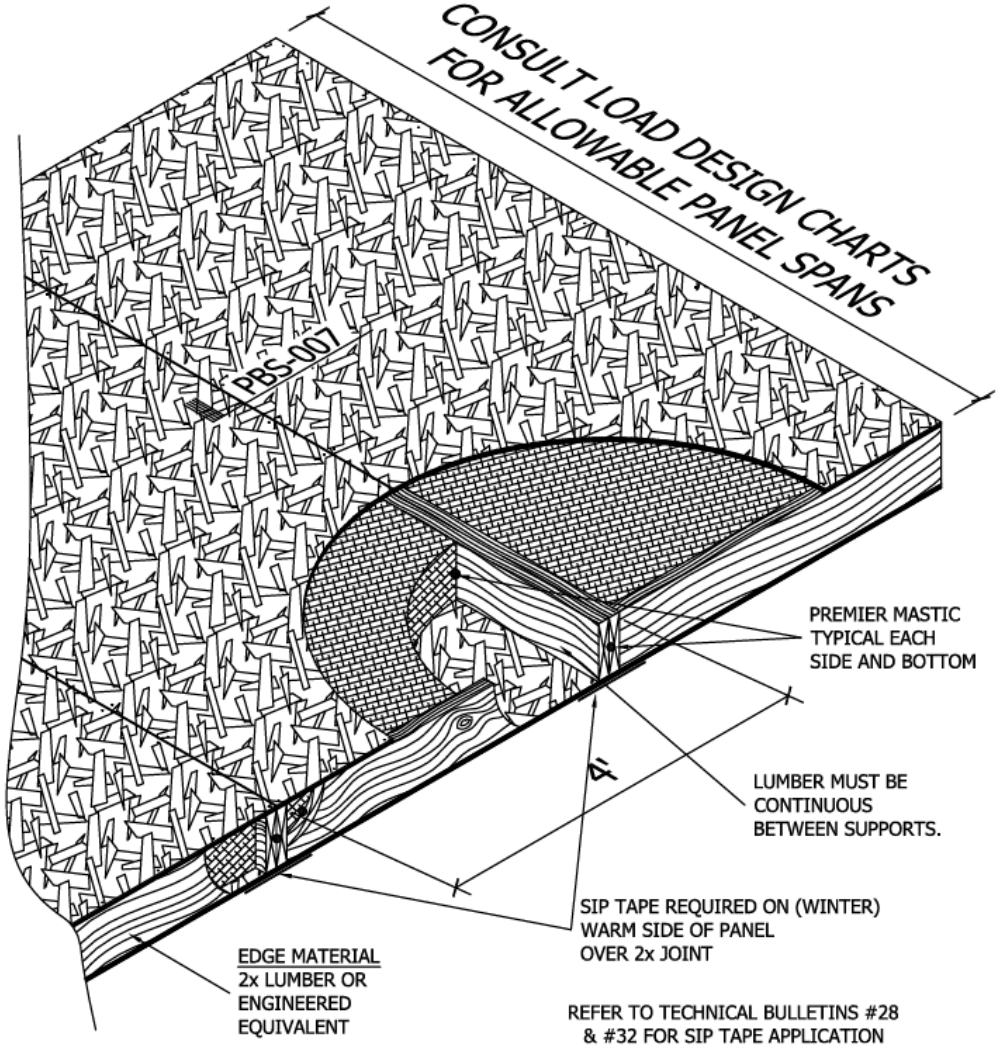
PBS-306 ROOF VALLEY CONNECTION 11-9-10
PREMIER SIPS

Roof Details: Parapet Detail PBS-307



PBS-307 PARAPET DETAIL 11-9-10
PREMIER SIPS

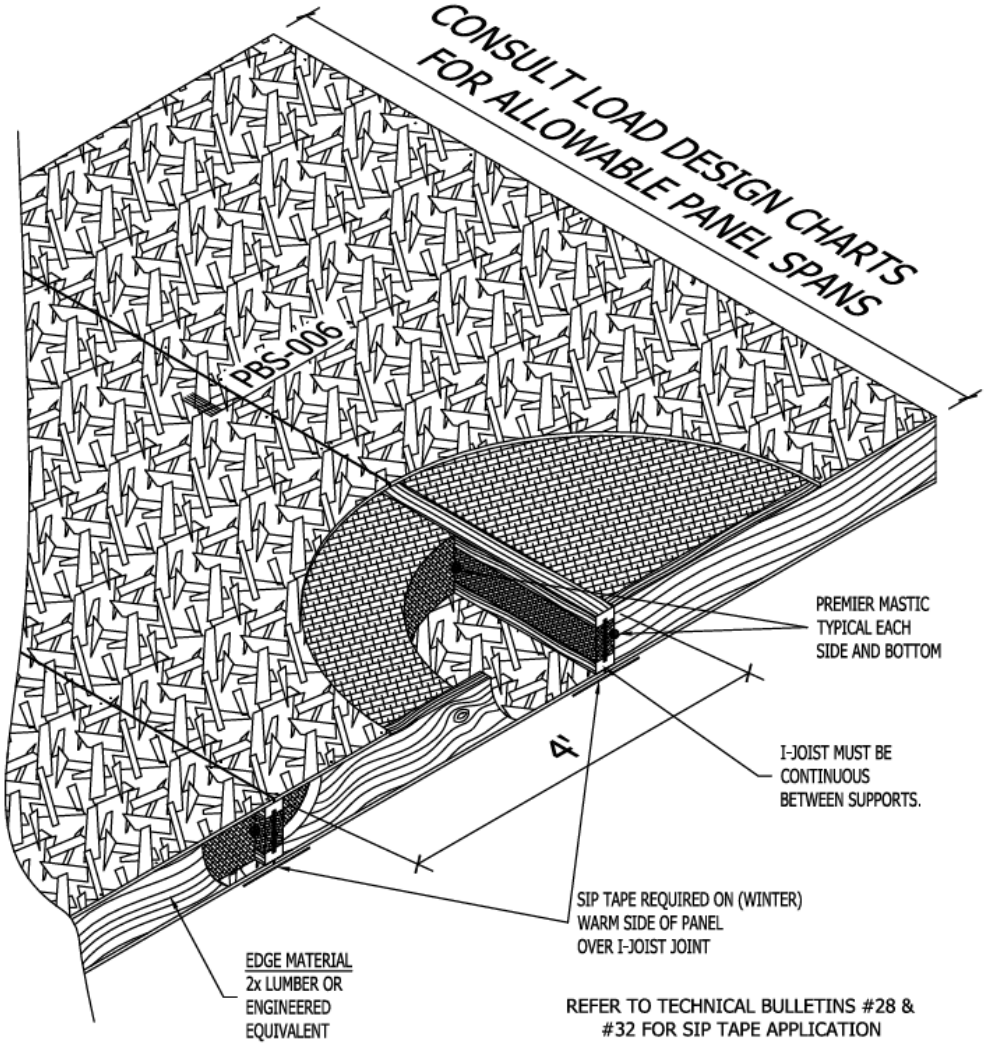
Roof Details: 2x Panel Joint Connection PBS-308



PBS-308 2x PANEL JOINT CONNECTION 11-9-10

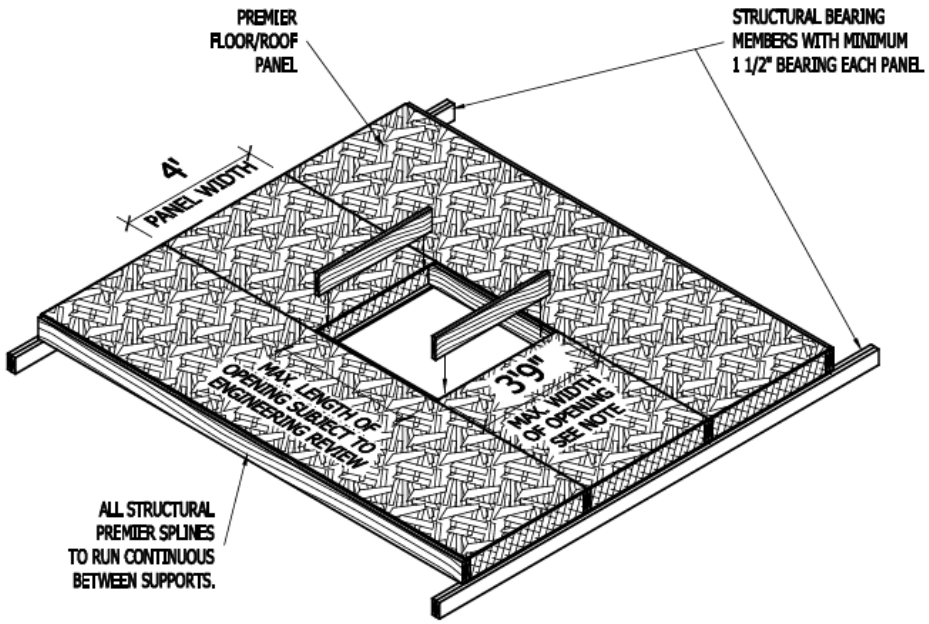
PREMIER SIPS

Roof Details: I-Joist Panel Connection PBS-309



PBS-309 I-JOIST PANEL CONNECTION 11-9-10
PREMIER SIPS

Roof Details: Roof/Floor Openings PBS-310

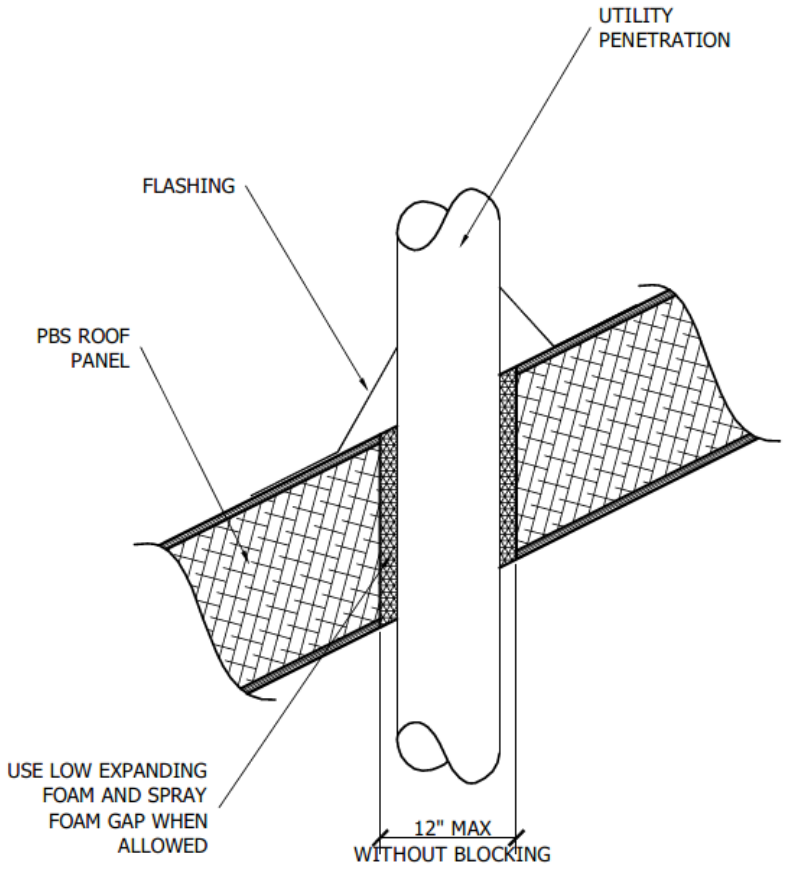


ALL FLOOR/ROOF OPENINGS MUST BE APPROVED BY A LICENSED ENGINEER.

NOTE:
FOR OPENINGS LARGER IN SIZE THAN SHOWN ABOVE OR FOR OPENINGS THAT CUT THROUGH SPLINES, ADDITIONAL FRAMING TO SUPPORT PANEL EDGES MAY BE NEEDED PER ENGINEERING REQUIREMENTS.

PBS-310 ROOF/FLOOR OPENINGS 8-20-07
PREMIER SIPS

Roof Details: Roof Penetrations PBS-311



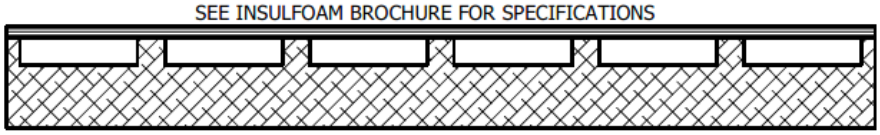
NOTE:
1. PROTECT EPS CORE FROM TEMPERATURES OF 160°F OR ABOVE. USE ZERO CLEARANCE INSULATING MATERIAL DESIGNED FOR HIGH TEMPS AS REQUIRED.

PBS-311 ROOF PENETRATIONS 8-20-07
PREMIER SIPS

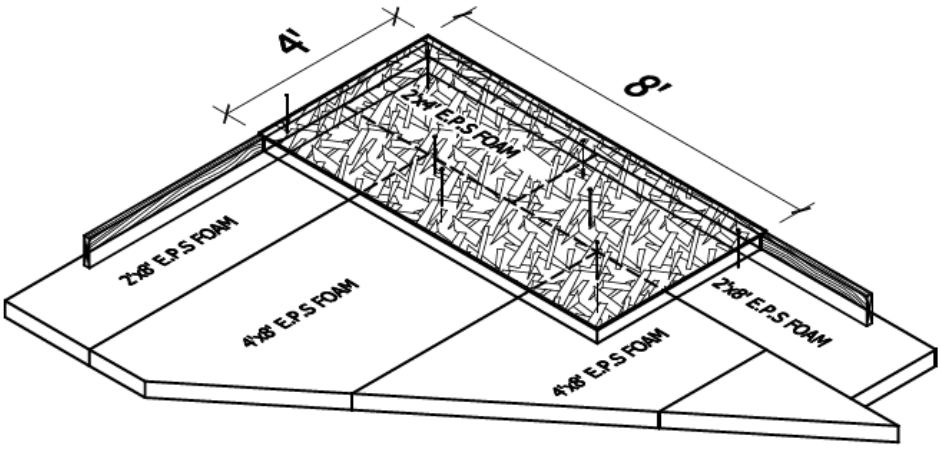
Roof Details: Vented/Non-Vented Insul-Lam PBS-312

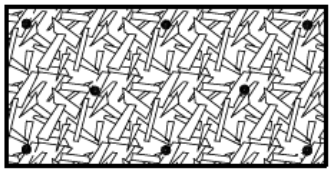
PREMIER VENTED INSUL-LAM INSULATION

SEE INSULFOAM BROCHURE FOR SPECIFICATIONS



TWO PART INSUL-LAM





SCREW PATTERN- 8 PREMIER SCREWS PER 4'x8' SHEET or PER ENGINEER.

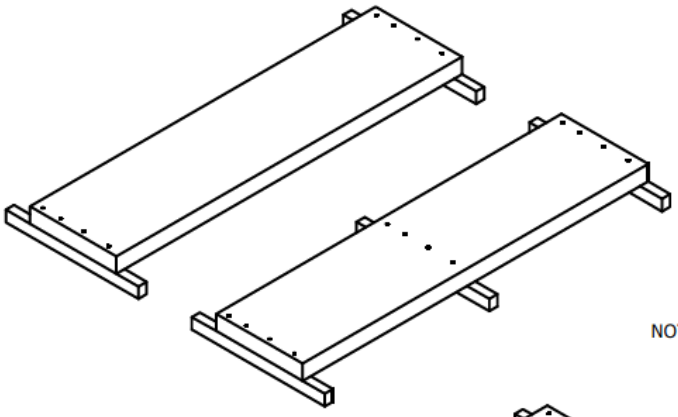
NOTE:

- THESE ARE NON-STRUCTURAL PANELS.
- OPTIONAL THICKNESSES AVAILABLE.

PBS-312 VENTED/NON-VENTED INSUL-LAM 8-20-07

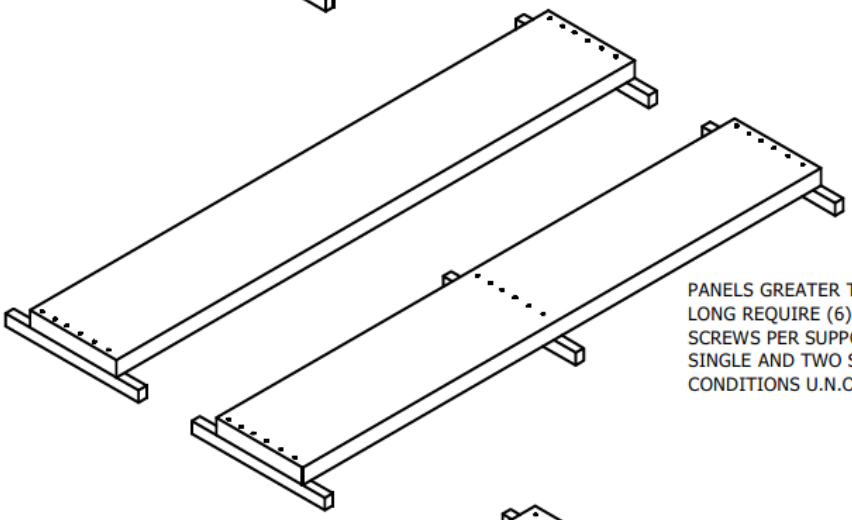
PREMIER SIPS

Roof Details: Floor/Roof Fastening Patterns PBS-313

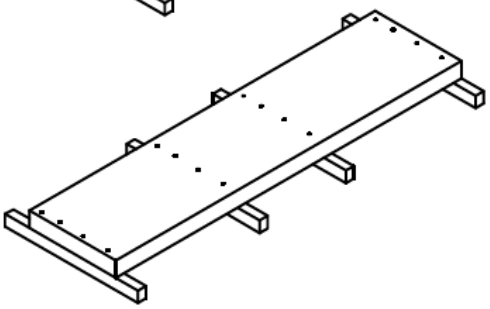


PANELS UP TO 16'-0" LONG REQUIRE (4) PREMIER SCREWS PER SUPPORT FOR SINGLE AND TWO SPAN CONDITIONS U.N.O.

NOTE: ALL PANELS ARE SHOWN 4' WIDE.



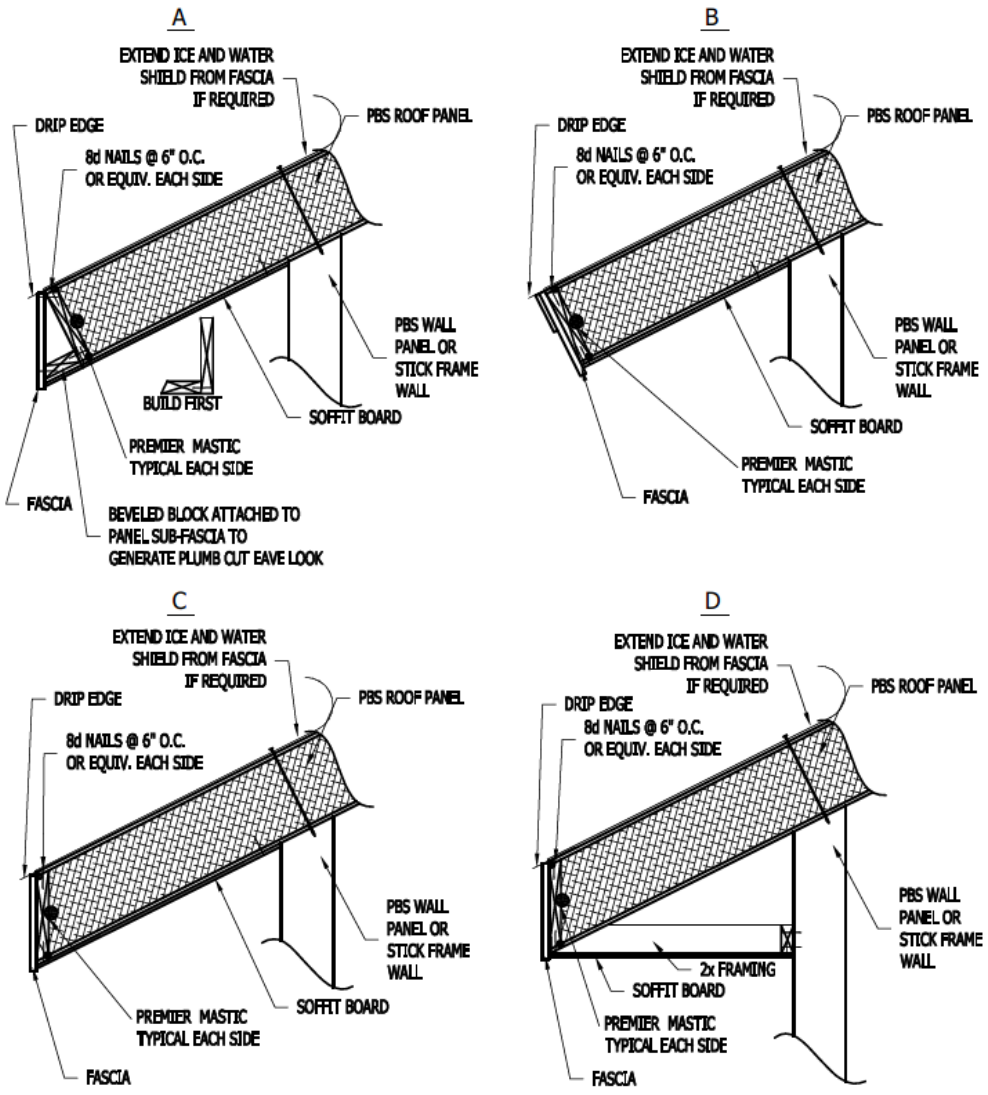
PANELS GREATER THAN 16'-0" LONG REQUIRE (6) PREMIER SCREWS PER SUPPORT FOR SINGLE AND TWO SPAN CONDITIONS U.N.O.



PANELS ANY LENGTH WITH MULTIPLE SPAN CONDITIONS REQUIRE (4) PREMIER SCREWS PER SUPPORT U.N.O.

PBS-313 FLOOR/ROOF FASTENING PATTERNS 8-20-07
PREMIER SIPS

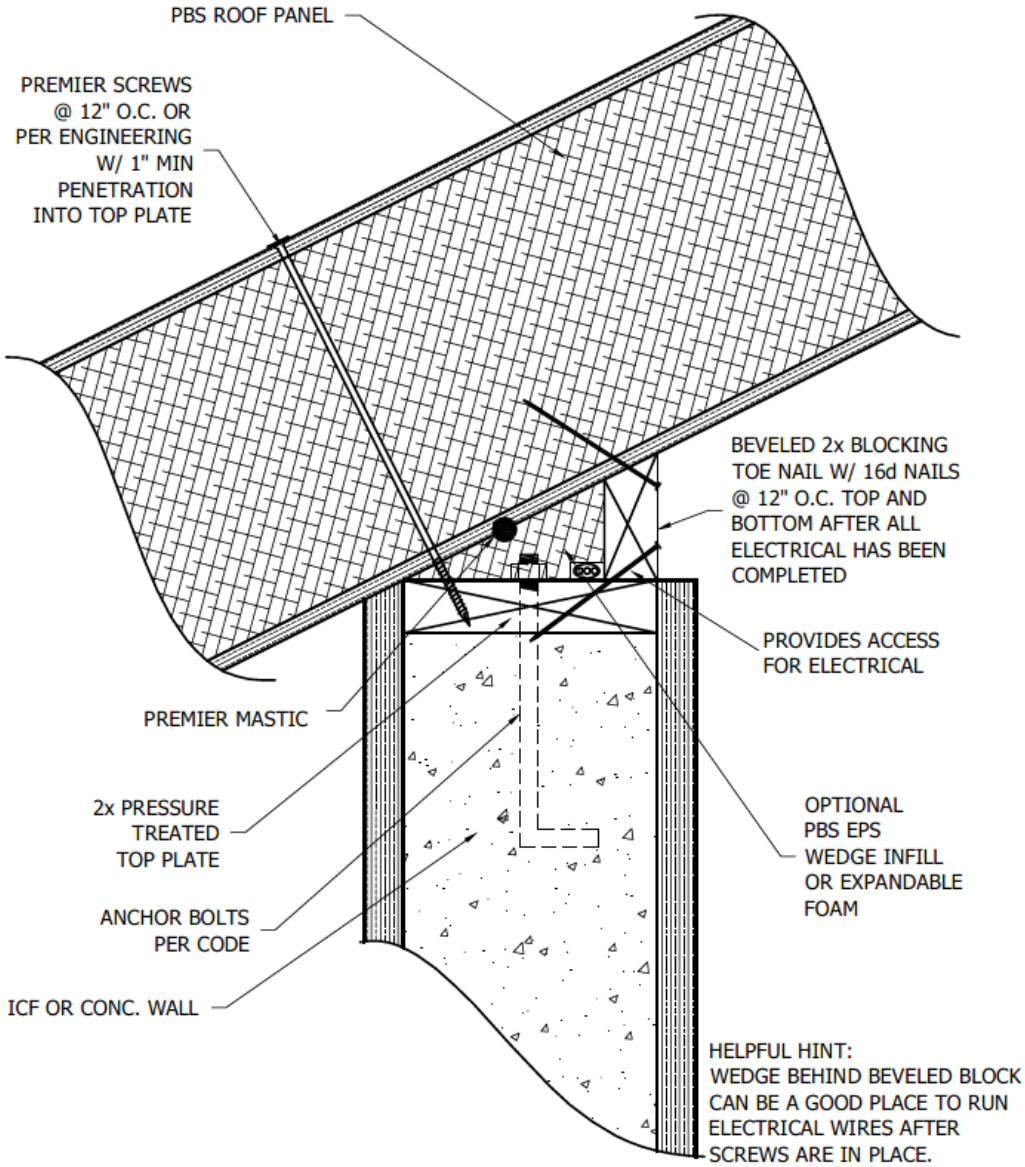
Roof Details: Eave Details PBS-314



NOTE:
- SEE LOAD DESIGN CHARTS FOR MAXIMUM OVERHANG.

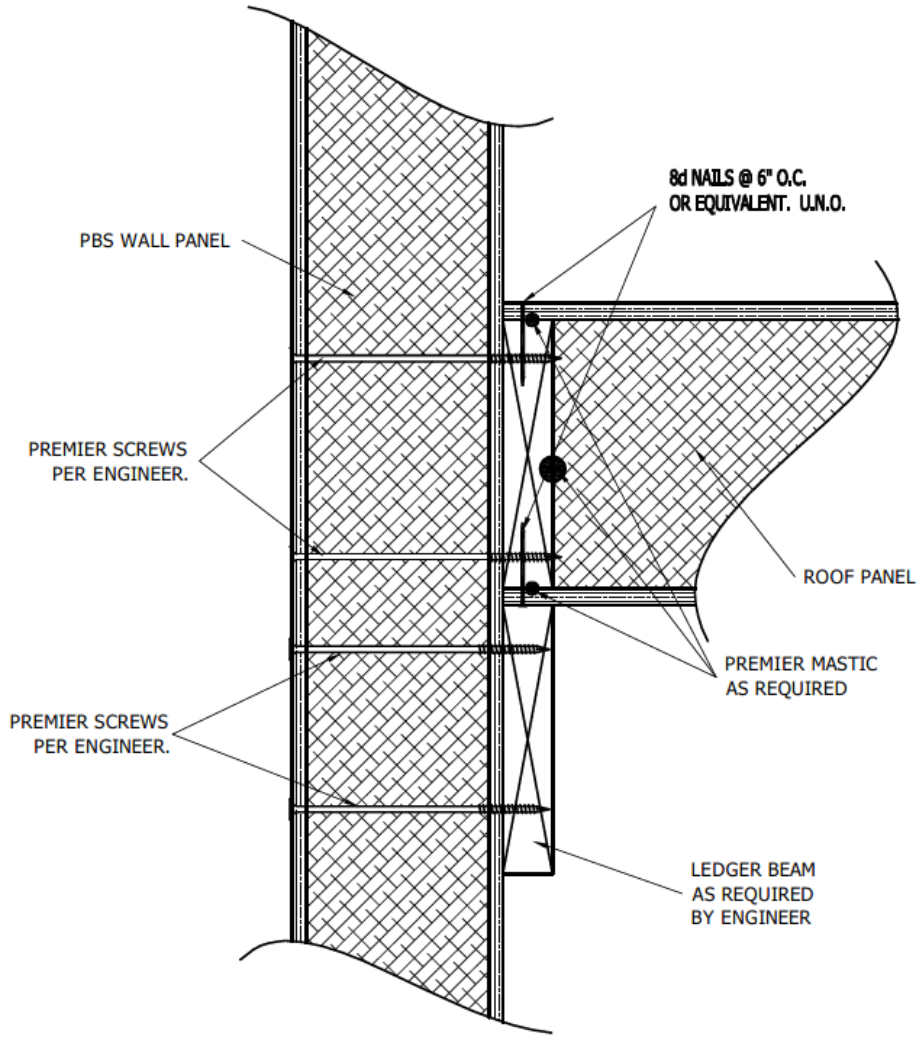
PBS-314 EAVE DETAILS 8-20-07
PREMIER SIPS

Roof Details: Roof to ICF Wall Connection PBS-315



PBS-315 ROOF TO ICF WALL CONNECTION 8-20-07
PREMIER SIPS

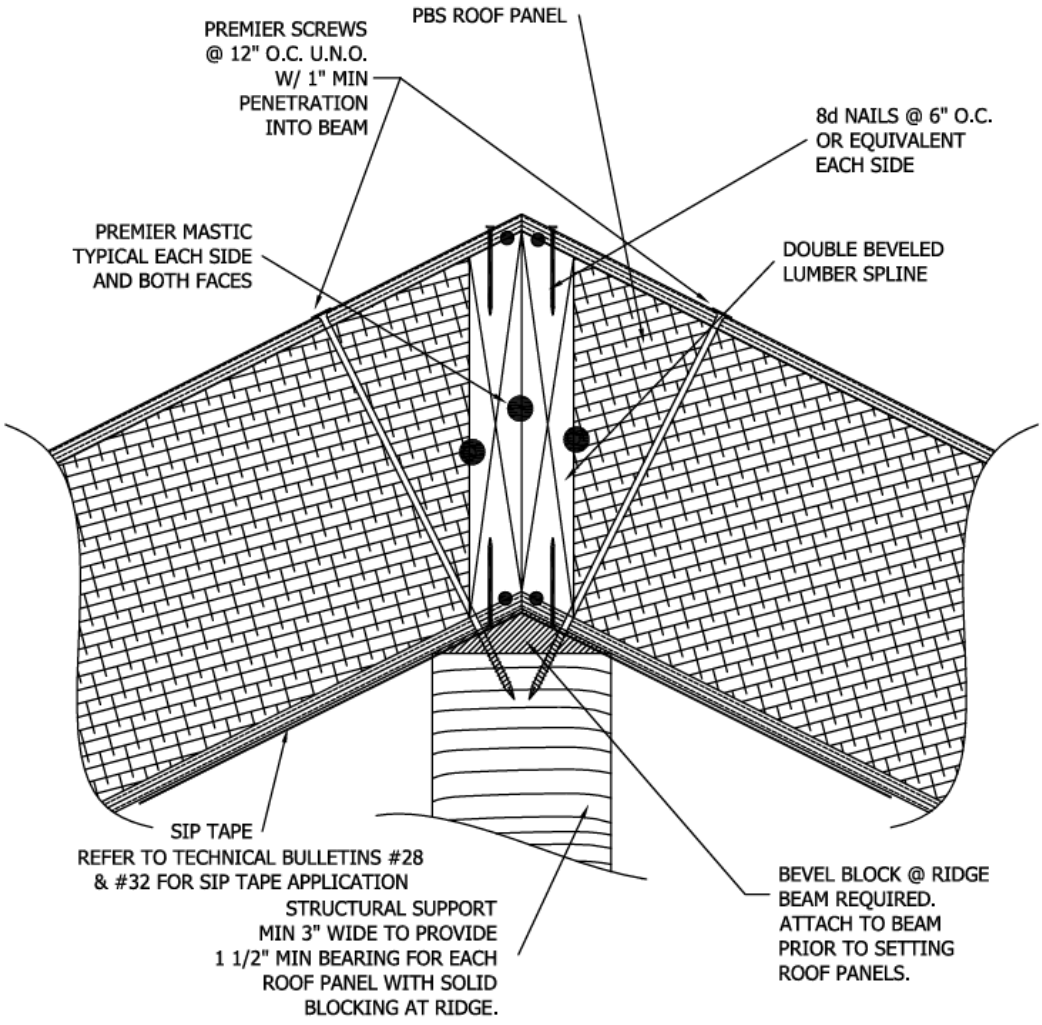
Roof Details: Roof Ledger PBS-316



NOTE: THIS DETAIL IS ONLY PERMITTED WHEN DESIGNED BY A LICENSED STRUCTURAL ENGINEER.

PBS-316 ROOF LEDGER 8-20-07
PREMIER SIPS

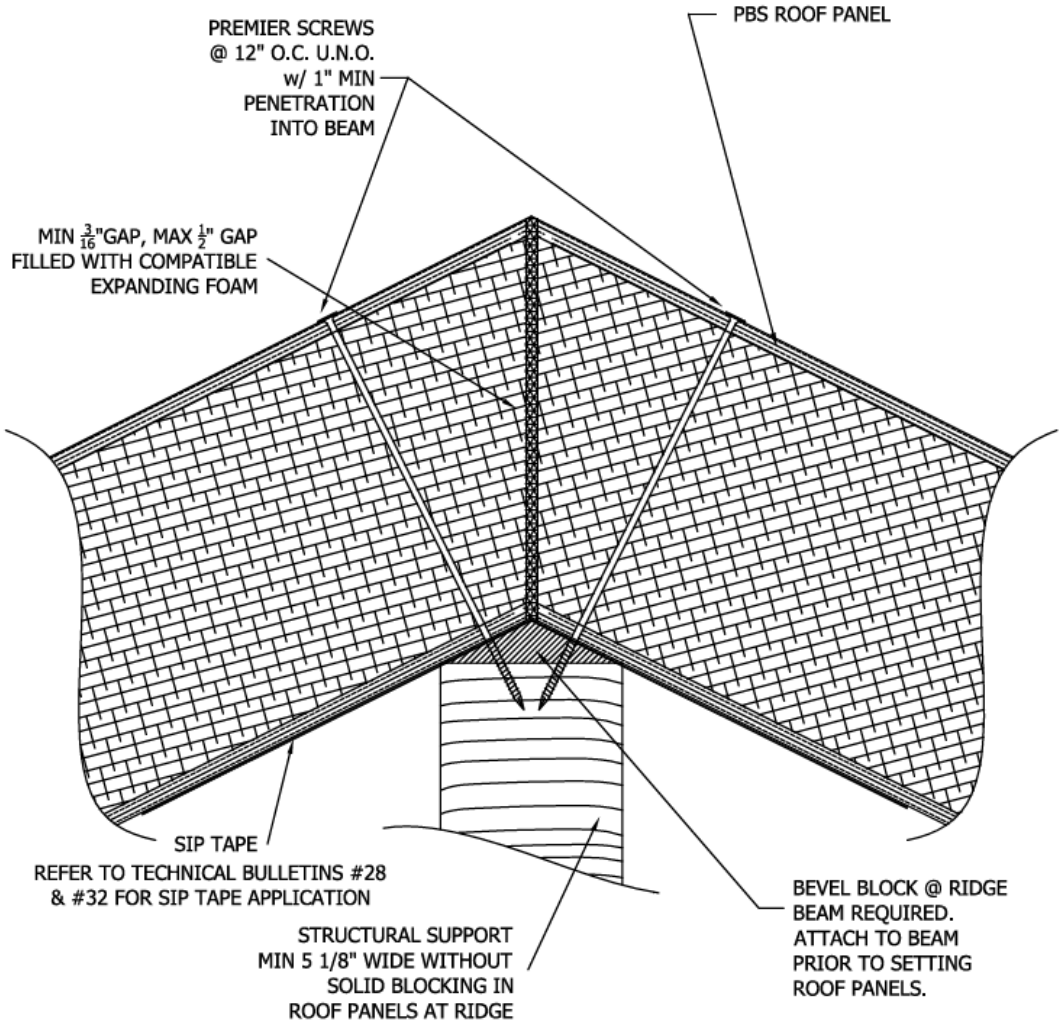
Roof Details: Plumb Cut Ridge/Hip Ridge with Blocking PBS-317



PBS-317 PLUMB CUT RIDGE / HIP RIDGE WITH BLOCKING 11-9-10

PREMIER SIPS

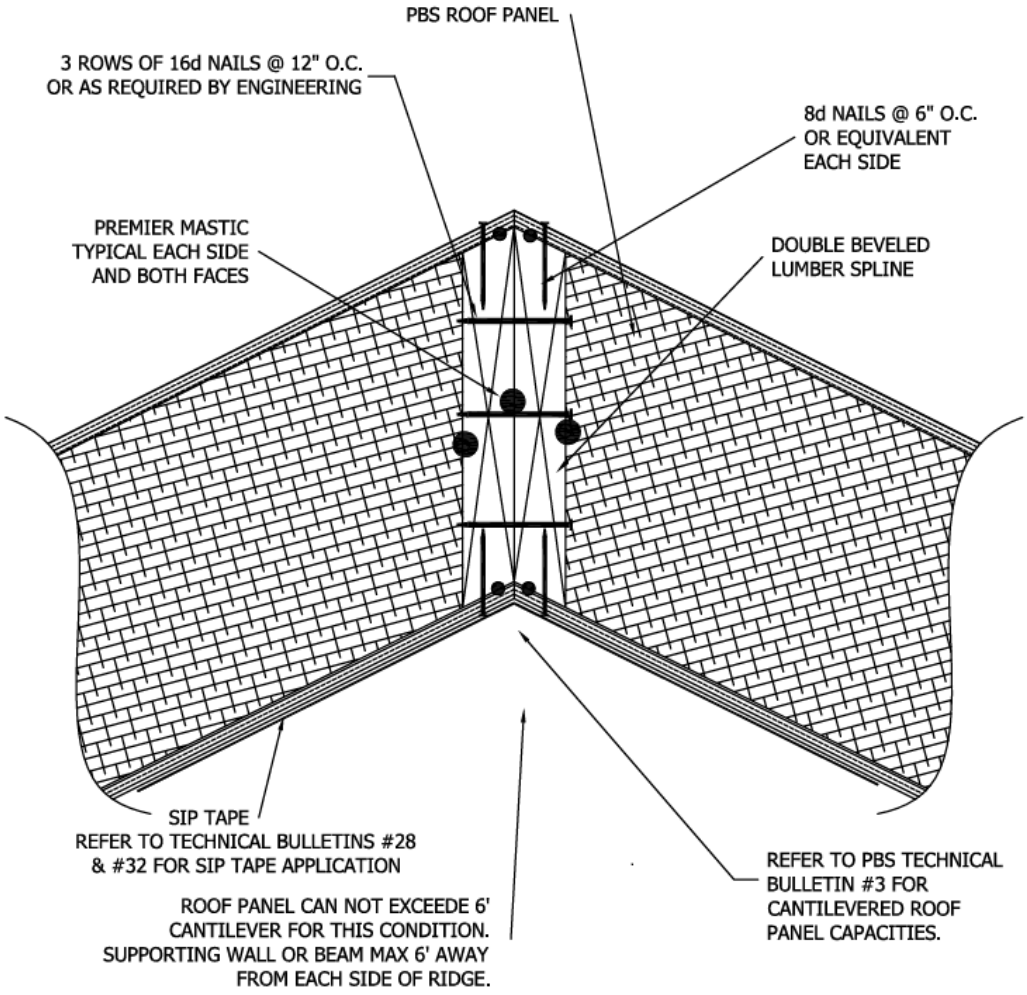
Roof Details: Plumb Cut Ridge/Hip Ridge without Blocking PBS-318



PBS-318 PLUMB CUT RIDGE / HIP RIDGE WITHOUT BLOCKING 11-9-10

PREMIER SIPS

Roof Details: Cantilevered Ridge with Blocking PBS-319



PBS-319 CANTILEVERED RIDGE WITH BLOCKING 11-9-10

PREMIER SIPS

Fire Protection and Interior Finish:
The EPS foam core shall have a flame spread rating of not more than 75 and a smoke development rating of not more than 450 when tested in accordance with ASTM E 84. All interior ceilings and wall surfaces are covered with ½ inch thick gypsum wallboard or other approved 15-minute thermal barrier. Floor finish shall be a minimum of 5/8 inch blandex or plywood.

Framing and Loadbearing Walls:
Wood-to-wood connections shall be provided between bearing walls and roof/ceiling or floor construction. Floor covering, including carpeting and vinyl tile, shall not be continued under loadbearing walls.

Roof Construction:
Trussed rafters shall be designed and constructed in accordance with the Truss Plate Institute, "National Design Standard for Metal-Plate-Connected Wood Truss Construction", and the appropriate HUD Truss Connector Bulleting.

Manufacturing Plant(s):
Premier Panels covered under this bulleting will be produced in the following plants:

Premier Building Systems
19727 57th Ave. E.
Puyallup, WA 98375

Premier Building Systems
1155 Business Park Drive, Bldg. A
Dixon, CA 95620-4303

The appropriate HUD Field Office or Homeownership Center in whose jurisdiction the manufacturing plant is located, or HUD designated representative will inspect this (these) plant(s) in accordance with prescribed procedures.

Quality Control:

The appropriate HUD Field Office or Homeownership Center in whose jurisdiction the manufacturing plant is located, or the State Agency (in Category III States) shall review and approve plant fabrication procedures and quality control program, to ensure compliance with approved plans and specifications. In addition, the manufacturing process and the quality control program shall be periodically reviewed by a third party inspection agency.

Installation:

The panels must be installed in accordance with the manufacturer's published installation instructions. A copy of the installation instructions must be available at all times on the jobsite during installation. Panel locations must comply with this Bulletin and the plans and specifications approved by the HUD Field Office or the Homeownership Center.

Records of Properties:

The manufacturer shall provide HUD a list of the first ten properties in which the component or system described in this Bulletin is used. The list shall include the complete address, or description of location, and approximate date of installation or erection. Failure of the manufacturer to provide HUD with the above information may result in cancellation of this Bulletin.

Notice of Changes:

The sponsor shall inform HUD in advance of changes in production facilities, transportation, field erection procedures, design, or materials used in this product. Further, the sponsor must inform HUD of any revision to corporate structure, change of address or change in name or affiliation of the prime sponsor. Failure of the sponsor to notify HUD of any of the above changes may result in cancelation of this Bulletin.

Evaluation:

This SEB is valid for a period of three years from the date of initial issuance or most recent renewal or revision, whichever is later. The holder of this SEB shall apply for a renewal or revision 90 days prior to the Review Date printed on this SEB. Submittals for renewal or revision shall be sent to:

U. S. Department of Housing and Urban Development
Office of Manufactured Housing Programs
451 Seventh Street, SW, Room 9168
Washington, DC 20410-8000

Appropriate User Fee(s) for the TSP program can be submitted through the Pay.gov website at https://pay.gov/public/form/start/73881741

The holder of this SEB may apply for revision at any time prior to the Review Date. Minor revision may be in the form of a supplement to the SEB.

If the Department determines that a proposed renewal or supplement constitutes a revision, the appropriate User Fee for a revision will need to be submitted in accordance with Code of Federal Regulations 24 CFR 200.934, "User Fee System for the Technical Suitability of Products Program," and current User Fee Schedule.

CANCELLATION:

Failure to apply for a renewal or revision shall constitute a basis for cancellation of this SEB. HUD will notify the manufacturer that the SEB may be canceled when:

1. conditions under which the document was issued have changed so as to affect production of, or to compromise the integrity of the accepted material, product, or system,

2. the manufacturer has changed its organizational form without notifying HUD, or

3. the manufacturer has not complied with responsibilities it assumed as a condition of HUD's acceptance.

However, before cancellation, HUD will give the manufacturer a written notice of the specific reasons for cancellation, and the opportunity to present views on why the SEB should not be canceled. No refund of fees will be made on a canceled document.

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This Structural Engineering Bulletin is issued solely for the captioned firm, and is not transferable to any person or successor entity.

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